

# BAE Wins \$45.6 Million Detroit Contract

BAE has been awarded a \$45.6 million contract—the company's second largest contract in its 31-year history—from Northwest Airlines for the Detroit Midfield Terminal.

"This contract is an important win for us," said Dan Kelly, president of BAE. "With the completion of this contract in 2001, each of the nation's top ten commercial airports will rely on a BAE automatic baggage transport and sort system."

The project calls for a standard high-speed conveyor system to transport the luggage of both inbound and outbound passengers using 25,000 feet of conveyor and nearly 100 Superpushers™.

"BAE is especially proud of this contract award as we beat two Michigan-based competitors, Webb and Rapistan, for the project," said Jay Bouton, account executive for BAE. "Our work at the San Francisco International Airport served as a model for Northwest in making their decision."



Depiction of the mile-long Detroit Midfield Terminal planned for completion in 2001

According to Charles McCloskey, director of construction for Northwest Airlines, this is the airline's largest luggage handling system. In order to expand Northwest's presence at Detroit Metropolitan Wayne County Airport, they will pull out of the main terminal in favor of the new Midfield Terminal, which will be exclusive to Northwest.

The inbound luggage conveyor systems will include seven new international luggage claim units and 11 new domestic claim units. Connecting conveyors will also be installed to allow Northwest's customers to check their bags in the new parking garage, rather than carrying luggage to the ticket counters.

Currently, BAE engineers have begun the planning and designing phase of the two-year project.

With this contract, BAE will continue its longstanding relationship with Northwest Airlines. In 1986, BAE built Northwest's automated luggage system at the company's hub in Minneapolis and, two years later, expanded it to accommodate additional international traffic.

### Detroit System Facts & Figures:

- Feet of Conveyor – 25,000
- Power Turns – 310
- Queues – 250
- 45-Degree Merges – 35
- Pushers – 96
- Jetclaims® – 14 at 3,500 feet
- Jetplates® – 21 at 3,800 feet
- Motor Control Panels – 100
- Express Check-In – 91

### Top Ten U.S. Airports

With the completion of the luggage handling system for Northwest Airlines in Detroit, all of the following airports will rely on a BAE automated system:

- |                  |              |
|------------------|--------------|
| 1. Chicago       | 6. Miami     |
| 2. Atlanta       | 7. Phoenix   |
| 3. Los Angeles   | 8. Denver    |
| 4. D/FW          | 9. Las Vegas |
| 5. San Francisco | 10. Detroit  |

# San Francisco Project Draws Praise

The San Francisco terminal luggage handling system contract, awarded in June 1997 by the San Francisco Airport Commission, has changed in scope over the course of the construction period, resulting in a 21-percent increase over the original \$43 million contract amount. BAE is providing both inbound and outbound baggage handling systems using conventional conveyor and high-speed pusher sorting technology for the new terminal at the San Francisco International Airport.

With five miles of conveyor and nearly 80 Superpushers™, the San Francisco project is the largest conveyor system in BAE's history.

BAE recently received congratulations on its progress in San Francisco from Pete Bittenbender, project manager for the San Francisco International Airport. "The second floor of the international terminal building was one of the most difficult work fronts for installation of a baggage system I have ever seen," he said.

Currently, Boarding Area A mechanical and electrical installation is 99 percent complete. Mechanical installation in Boarding Area G and the South Shoulder area is more than 90 percent complete. North Shoulder mechanical engineering is finished with only the sway brace design left to install. Mechanical engineering for the outbound and inbound terminals is almost complete with the conveyor, catwalk, and support models finished. In addition, the electrical engineering motor control panel design is complete. As BAE's engineers complete work in San



Aerial view of the San Francisco International Airport's new international terminal, due to open in 2000.

Francisco, they will be phased over to the recently won Detroit project.

"Next week, we will be reaching another milestone," said Bob Pollard, project manager for BAE. "Our electrical technicians and engineers will start loading PLC programs, which will control the automation of the system from the control rooms. We will then start five months of check-out, followed by two months of testing, before we turn the system over to the customer."

The multi-level main terminal building, housing arrival and departure areas as well as office and support space, will span the entry and exit roadways to the airport. Boarding Area G will extend north from the main terminal, and Boarding Area A will extend to the south. Each boarding area will contain 12 wide-body gates.

## Outbound system features:

- Conveyors for 168 ticketing positions in six modules on the departures level
- Two multi-level security screening areas
- Three 39-inch-wide mainlines in each of two 1,100-foot-long boarding areas
- 17 flat-plate recirculating make-up devices at ramp level
- A system sorting capacity of 480 bags per minute
- Numerous inputs for handling transfer bags
- Four 57-inch-wide conveyor lines for oversized items
- Conveyor connections to and from United's system in the F Concourse

## Inbound system features:

- 12 BAE JetClaim slope plate public claim devices
- Two feed conveyors to each claim device
- Two 57-inch-wide conveyor lines for oversized items
- 207 weighing scale positions

The Conveyor is published every other month by the Corporate Communications Department of BAE Automated Systems, Inc., 2525 Carter Drive, Carrollton, TX 75006.

**Brittne L. E. Bailey**

Editor

**John H. Carrell, Jr.**

Graphics

Entire contents copyright © 1999, BAE Automated Systems, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, printed, electronic, mechanical, recording, or otherwise, without the express written consent of BAE Automated Systems, Inc.

# First ProE Projects Underway

Baggage system projects underway for Honolulu and Seattle are the first to utilize the capabilities of the integrated ProEngineer/Microstation/BaaN environment that has been in development for the past year.

The new mechanical engineering software environment brings together three different software applications—MicroStation, ProEngineer (ProE), and BaaN—and connects them

ments, lead times, and project schedules.

"Before, we treated each product as a custom order. Now, our engineering database, which stores and controls requests for components created within ProE, indicates if a component has been created before and provides the drawings on demand in a level of detail we never had before," said Bob Loshelder, manager of engineering support. "Where it took weeks to design a component through our previous system, now it takes a matter of days."

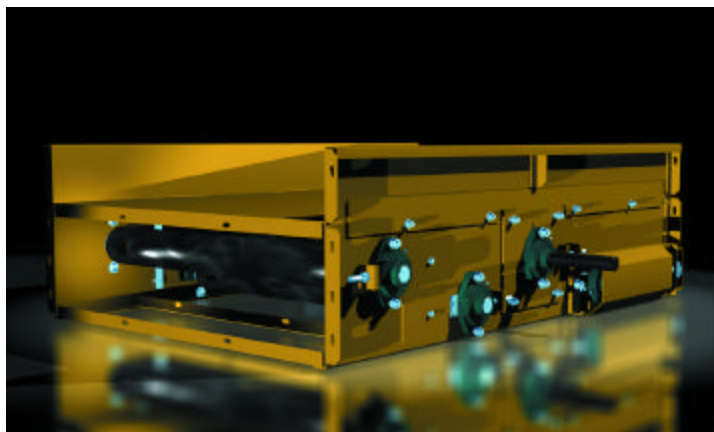
As the components are recreated, they are designed using parameters which allow each

design to suit a predetermined, standard range of requests. When a request is entered into ProE, it creates a drawing only if the project specifications are within the standardized parameters. This focus on accuracy decreases the need for custom cutting in the field.

BAE has completed the redesign of beds, snubs, takeups, drive takeups, power units, RBOs, power turns, tapered rollers, and sort pier systems. Currently, engineers are standardizing ticket counter systems, hanging and floor support systems, and merges.

"Although we are currently using this integrated environment on our Honolulu and Seattle projects, we plan to use it on our larger contracts, as well," said Loshelder. "With the current projects in the system, about 50

(Please see ProE Reengineers BAE on page 4)



Drive Take up designed in ProE and rendered in 3D Studio Max.

using a custom interface developed by BAE software developers.

After standardizing each of the company's products through a set of design parameters, the ProE team developed parametric solid models of each product. Using the proprietary interface, system designers using Microstation can send product requests to ProE. The interface queries the ProE database to see if the required components already exist. If so, the software will immediately print out a bill of materials and detailed manufacturing and assembly drawings for each component. When the required components do not exist, ProE will generate a new instance of the component to meet the required specifications. The new product information is then processed through BaaN, BAE's new Enterprise Resource Planning system.

BaaN provides labor require-

## Employee Promotions

Vice President, Operations

Vince Ballisty was named Vice President of Operations for BAE. He has 32 years of quality and manufacturing



systems experience. His background includes 12 years at Boeing, 10 years of engineering and test management for the computer industry, and 10 years of operations experience in conveyor based systems for the automotive industry. Ballisty has directed 17 companies in achieving their ISO 9000 registration.

Director, Quality Assurance



Bruce Page was recently promoted to Director of Quality Assurance, charged with developing a quality program and systems for ISO 9001 certification. He is instrumental in the development of design and engineering procedures and is a principal team member in the Enterprise Resource Planning computer system.

Manager, Human Resources



Patty Niekamp was promoted to Manager of Human Resources. Previously, she was Benefits and Compensation Analyst and has been with the company for 15 years. In addition to managing the Human Resources Information System, recruiting, benefits, and various employee relations issues, she is a standing member of the suggestion committee, helps coordinate the Employee of the Month program, as well as plan company sponsored events.

# Employees of the Month

January marked the inauguration of the Employee of the Month program at BAE. Honorees for January, February, and March are Phil Hemmer, Bill Hartwell, and Jay Bouton, respectively. Each received a plaque, a \$200 gift certificate to Best Buy, and a \$25 gift certificate to a local restaurant.

Phil Hemmer, a manufacturing supervisor, was selected for his contribution to the implementation and ongoing administration of the BaaN project. He is a major contributor to loading, checking and correcting bills of material prior to manufacturing and installation.

A BAE veteran of nearly 23 years, Hemmer entered and verified more than 4,000 items in the BaaN system as part of the ERP launch. He is credited with "saving the company countless dollars by correcting engineering bills of material prior to their release to manufacturing."

February's honoree, Bill Hartwell,

is the lead man in final assembly. He was chosen for his detailed knowledge of the job, courteous and thorough response to inquiries, and ability to spot potential problems with equipment before shipping.

Hartwell has been a member of the mechanical assembly team since he joined the company in 1992.

The Employee of the Month for March, Jay Bouton, was commended for his sales efforts in landing the Detroit luggage handling system contract from Northwest Airlines. He was instrumental in the negotiations leading to the award of this \$45.6 million contract, which, according to John Gude, director of marketing and business development, "was considered a "must win" for BAE to reestablish its position as the number one supplier in the western hemisphere." Bouton has been on the company's marketing/sales team for eight years.

Nominations can be submitted by all employees at any suggestion box or emailed to Sandy Burwell.

## ProE Reengineers BAE

(Continued from page 3)

percent of the components are repeats, which means we are maximizing our engineering time and resources."

ProE also has various benefits to departments other than Engineering. It exports a 3-D model file which Corporate Communications then animates for marketing applications. ProE assists manufacturing employees by enabling them to view ProE from their workstations without having to obtain a printed copy of drawings necessary for production.

## BAE Headquarters Renovation

The second phase of BAE's north building renovation project is nearing completion with the modernization of the engineers' area, a room with nearly 90 cubicles, 13 offices, and three conference areas. A new software lab, print room, archives area, and elevator, also part of remodeling phase two, will soon be ready for use.

## New employees

Glenn Shankle joined BAE as Manager of Electrical Engineering on December 1, 1998. He has 28 years of engineering experience, most previously directing the engineering efforts of robotics company Vinten Inc. Shankle also worked for 12 years as Director of Electrical Engineering and Digital Systems for Letourneau Inc., a heavy equipment and material handling company. He received a Bachelor of Science degree in electrical engineering from Texas A&M and an MBA from the University of Tennessee.



### Others

Raymond Castagnaro, Project Manager (10/26/98); Donald Helms, Project Manager (11/2/98); Shawn Curry, Junior Technician (11/4/98); Jeffrey Van Sickle, Junior Technician (11/8/98); Nick Kinser, Technical Writer (11/9/98); Michael Castello, Senior Software Engineer (11/23/98); Chad Pennington, Junior Technician (12/10/98); Lisa Hall, Technical Writer (1/21/99); David Pait, Electrical Engineer (2/15/99); Darlene Floyd, Software Engineer (3/1/99); Gary Culbertson, Account Executive (3/1/99); Brittne Bailey, Public Affairs Specialist (3/15/99); Eric Meyer, Lead Mechanical Engineer (3/23/99); Sue Guillot, Accountant (3/29/99); Michael Pickard, Mechanical Designer (4/5/99)