

BHS – Recapitalization vs. Optimization

ACI-NA Operations & Technical and
Public Safety & Security Conference

March 6, 2013

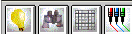
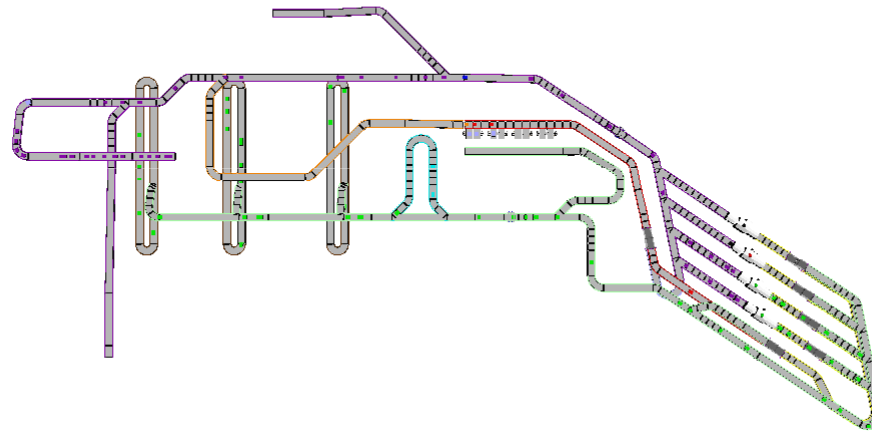


Inline CBIS – The Beginning

- After 9/11 ATSA mandated the installation of EDS baggage screening equipment at all US Airports
- BOS Logan was the first airport to implement an airport-wide inline CBIS meeting the 12/31/02 deadline
- Since 2002 most Cat X, Cat 1 and many Cat 2 and 3 airports have developed inline Checked Baggage Inspection Systems (CBIS)
- The useful life of the EDS equipment initially installed at these airports is 7 to 10 years



BOS B3/B4 Inline CBIS Optimization



21120.48

BOS B3/B4 CBIS with 3+1 3DX L3 6700s - CREATED BY SHAFIN TALHID, TRANSOLUTIONS



Inline CBIS – Now

- Original EDS equipment will need to be replaced soon based on their projected life
- In 2007 the TSA's "Planning Guideline and Design Standards (PGDS)", version 4.1 was published documenting recommended BHS performance—*subsequent to many BHS deployments*
- Currently, published PGDS guidelines do not specifically address requirements for recapitalizations and optimizations
- TSA initiated pilot programs at SFO and BOS to recapitalize or optimize their inline systems



Recapitalization

- Definition – the replacement of inline EDS machines with new EDS equipment
- This means you replace the EDS equipment and nothing else. Typical OTA agreements state that a recap allows for EDS and minor conveyor modifications
- Practically every recapitalization will have some degree of system upgrade
 - If upgrading from CTX equipment, technology has changed from “stop and scan” to “continuous feed”, so conveyors before and after EDS will need to be modified
 - If On-screen Resolution (OSR) times or the Checked Baggage Resolution Area (CBRA) do not meet current PGDS requirements, significant upgrades will be required



Typical OTA Recap Requirements

- The standard TSA OTA agreement states that Recap system designs should accommodate new EDS equipment throughput
 - CTX 9800 – 680 bags/hr
 - L3 3DX 6700 – 540 bags/hr
 - L3 3DX 6700ES – 680 bags/hr 🕒
- Legacy CTX 9000/9400 and L3 3DX 6700s produced approximately 400 to 500 bags/hr or less depending on system configuration
- Minor BHS system improvements may be insufficient to improve throughput requirements



OTA Recap Requirements

- OTA requires that an Average Day Peak Month (ADPM) analysis be performed to determine Recap EDS throughput requirements
 - Document existing EDS throughput capability and understand EDS requirements based on achievable rates
 - Determine if the system is capable of delivering (and taking away) at the higher rates of the new machines
 - Limited design options to be considered



Additional Modifications Common

- Based on discussion with TSA OST and local TSA a Recap may be more than just replacing machines
- Changes seen in Recaps have included:
 - Consolidating mainlines
 - Eliminating pre-EDS recirculation loops
 - Upgrading CBRA to be PGDSv4.1 compliant
 - Eliminating EDS machines
 - Modifying conveyors to meet 45 second On-Screen Resolution time
- In some cases, a Recap can be very similar to an Optimization



Optimization

- Optimization – the replacement of inline EDS machines with new EDS machines and upgrade all aspects of the CBIS
- Optimizations have identical requirements to building a new system
- The CBIS must be fully PGDSv4.1 compliant (except for TSA-approved Request for Variances (RFVs))
- Optimizations must have a 10 year TSA ROI based on:
 - Reduced staffing
 - EDS machine reduction
 - Lower O&M costs



Recommendations

- A Recap is more than simple equipment replacement
- Operational impacts and phasing requirements should be considered since new equipment will require a TSA iSAT certification
- The TSA Checked Baggage Deployment Manager should be your best friend and will help you coordinate with various groups within TSA (Appropriations, OST, etc.)
- Hold regular Design Coordination Meetings that include the Deployment Manager, local TSA, and key members of the ILDT
 - Communicate, communicate, communicate
- Make sure your cost estimates cover everything!
 - The design portion of the OTA will define your budget, and it will be difficult to get more money after a Construction OTA is in place



Thank You

Gloria Bender
Managing Principal
gbender@transsolutions.com
817.359.2954

Eric Miller
Vice President
emiller@transsolutions.com
817.359.2955

