

NEXTOR Annual Research Symposium

November 14, 1997

Session I

Safety and Security

Positive Passenger Baggage Match

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ECONOMIC IMPACTS OF PPBM: WHAT WOULD IT COST??

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NEXTOR Research Symposium
11/14/97**

PPBM COST ITEMS

↑Implementation Expense

↑Delay Related Cost

- Aircraft Delay
- Traveler Delay
- Misconnection

↑“Rigidity” Costs

↓Baggage Mishandling Costs

IMPLEMENTATION COST ASSUMPTIONS

Full Deployment of Automatic Boarding Pass Readers

Additional Gate Agent for 40% of Flights

Bag Room Crew that Must Perform Bag Pull is Released from Next Scheduled Flight

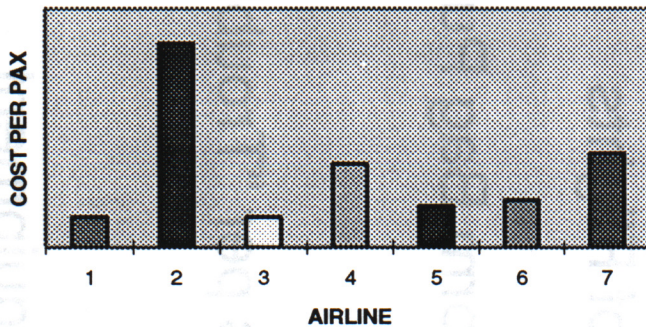
Six Researcher Person-Minutes per “Troubled Bag” for Bottom-Up Screen

Additional Curbside Staff and Equipment

Implementation Cost

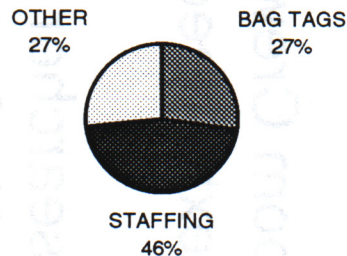
Airlines' Estimates Differed Markedly

PREDICTED COST PER PAX FOR PPBM



Sources of Variation include Staffing, Bag Tags, and Other (Mainly Equipage)

SOURCES OF DIFFERENCE IN IMPLEMENTATION COST ESTIMATES (PER PAX)



DID LIVE TEST “BIG SPENDERS” AVOID OPERATIONAL IMPACT?

Delays roughly equal for

- carriers with and without boarding pass readers
- carriers that did and did not increase gate staff
- carriers that did and did not “manifest” bags

RIGIDITY COSTS

Under PPBM:

- Travelers Could Not Take Earlier Flight when Bags are on Later One
- Travelers with Checked Bags Would be Discouraged from Missing Flights on “Spur of the Moment”
- Travelers with Checked Bags Could not Give Up Seats for Free Travel on Overbooked Flights

Assessment Must Consider:

- Very Few Travelers Affected
- But They Are More Likely to be Full Fare
- Increased Carry-On Bags is Already a Problem

REDUCED BAGGAGE MISHANDLING

Published Estimates of Airline Baggage Mishandling Costs
\$0.20-\$0.30 per Passenger

Additional Cost in Passenger Disutility

Airlines Expect Sizable Reduction in Mishandling from
PPBM

Results: Reduced Mishandling Benefit $<$, but not $<<$, Indirect
Costs

DELAY RELATED COSTS

Delays and Misconnections Estimated from Live Test and SABRE DPM Runs

Airline Delay Cost Factors from Carrier Estimates and Published Sources

Traveler Delay Cost Factors based on FAA Estimates for Value of Travel Time (Internal Debate over whether to Include)

Misconnection Cost from Carrier Expense Estimates, Travel Time Valuation, and NAHO Valuation