

105030

DOCUMENT RESUME

05030 - [B0345218] (Restricted)

[Review of Proposal for Establishing a Centralized Government Travel Agency]. LCD-78-209; B-103315. February 3, 1978. 11 pp.

Report to Sen. Edward Zorinsky; by Fred J. Shafer, Director, Logistics and Communications Div.

Contact: Logistics and Communications Div.
Budget Function: Commerce and Transportation: Air Transportation (405).
Organization Concerned: General Services Administration.
Congressional Relevance: Sen. Edward Zorinsky.
Authority: Privacy Act of 1974.

A Government-wide automated airline reservation and ticketing system was proposed to reduce costs by using fewer people. The basis for savings in the proposal is the reduction of personnel currently processing travel reservations (direct labor) and the elimination of indirect labor, such as secretaries, involved in the travel process. The saving in indirect labor would not be realized by eliminating any personnel but would represent incremental savings of time which could be devoted to more productive functions. In addition, overpayments to airlines believed to occur in current procedures could be eliminated. Current and proposed cost estimates cannot be validated because the basic data used in the proposal were unreliable. Centralized system equipment costs were estimated to be about \$960,000 based on the proposal's estimate of travel volume. This estimate was preliminary and was apparently based on a misunderstanding of the system's concept. Abandoning independently developed agency reservation and ticketing systems in favor of a centralized system requires planning, coordination, and consensus. The proposed system appears to be technically feasible because of its similarity to systems used by major airlines. However, alternative methods have not been considered. (RRS)

5218



UNITED STATES GENERAL ACCOUNTING OFFICE

RESTRICTED — Not to be released without the approval of the General Accounting Office except on the basis of specific approval of the Director of Congressional Relations, Logistics and Administration Division

WASHINGTON, D.C. 20548
FEB 03 1978

B-103315

The Honorable Edward Zorinsky
United States Senate

Dear Senator Zorinsky:

In your April 7, 1977, letter, you asked us to evaluate a proposal to establish a centralized Government travel agency. Specifically, you asked that we consider costs and the personnel savings which could be realized by adopting the proposal, together with any other collateral benefits and effects.

The proposed system is supposed to substantially reduce costs by accomplishing the Government-wide reservation and ticketing function with fewer people. Additional savings are claimed by avoiding currently undetected ticket overcharges. The proposal also anticipates other benefits through improved travel management which are not directly measurable.

The concept of a centralized Government reservation and ticketing system appears to be technically feasible. However, the estimated savings resulting from a centralized system are questionable. The cost estimates were unsupported or were based on unreliable information.

The proposal did not consider the practical aspects of implementing a centralized system. Needs of individual agencies were not addressed, and no provision was made for agency participation in planning for the system.

Finally, a centralized travel system is only one of several alternatives that could be considered if the Government reservation and ticketing functions were to be changed. The proposal did not address other alternatives. In our view, all possibilities should be studied before deciding which system best suits the Government's needs.

BACKGROUND

Advances in computer technology and automatic data processing have enabled major airlines to develop reservation and ticketing systems to process the increasing number

LCD-78-209
(943303)

of passengers. These reservation systems contain airline flight schedules and seat availability information, can automatically compute most fares between domestic locations, and can print a ticket at remote locations convenient to passengers.

The proposed system is a Government-wide automated airline reservation and ticketing system conceptually similar to those operated by several airlines. Telephones would connect the traveler anywhere in the United States with the central reservation center in Washington, D.C. A central computer would contain flight schedules, seat availability, fares, and other information. The Government computer would be connected with similar computerized systems maintained by the airlines. Reservations would be made instantaneously, and tickets would be issued mainly through teleticketing machines located either at Government offices convenient to the traveler or at the airport terminal ticket counter.

To illustrate--a traveler would call a General Services Administration (GSA) terminal operator in Washington, D.C., over Government-leased telephone lines, from any point in the United States. The traveler would specify location, destination, and flight preferences. While the traveler is still on the phone, the operator would obtain flight schedules, seat availability and other information, which is flashed onto the terminal screen of a GSA computer. The operator would verbally relay the information to the traveler. The traveler would select the flight, and the operator would make the reservation. Simultaneously, the computer would automatically survey the traveler's flight plan for compliance with the Fly America Act, perform a mechanical audit to insure the correctness of flight charges, debit the account of the traveler's agency, and instruct the airline computer to issue the ticket through a teletype machine at a location convenient to the traveler.

IMPORTANT ASPECTS NEED MORE DEVELOPMENT

A centralized travel system is one of several possible methods that could be considered if the Government reservation and ticketing function were to be changed. However, important aspects of the proposal need much more development and consideration before a meaningful evaluation can be made. For example:

- Supporting data for the economic benefits cited in the proposal need further validation.
- Organizational constraints and related problems need consideration.
- The technological feasibility of establishing a centralized travel agency needs additional study.
- The merits of all possible alternatives need consideration.

Projected economic benefits need validation

The proposal emphasizes the projected annual savings of about \$36 million resulting from reduced labor costs and the elimination of overcharges due to mistakes in computing fares. The proposal estimates current system operating costs at \$38 million and costs for the new system at slightly less than \$2 million. A comparison of current and proposed system costs based on proposal data follows:

	<u>Estimated annual costs</u>	
	<u>Current</u>	<u>Proposed</u>
Direct labor	\$17,200,000 (1,059 personnel)	\$ 970,000 (72 personnel)
Indirect labor	11,800,000	-
Overpayments to airlines	9,000,000	-
Leased automatic data processing equipment	-	960,000
Total cost	<u>\$38,000,000</u>	<u>\$1,930,000</u>

As just mentioned, the basis for savings is the reduction in the number of personnel currently processing travel reservations (direct labor) and the elimination of intermediate personnel (indirect labor such as secretaries) currently involved in the travel process. The savings in indirect labor would not be realized by eliminating any personnel, but would represent incremental savings of time which could be devoted to more productive functions. In addition, overpayments in ticket fares to airlines believed to occur with current procedures would be eliminated.

Direct labor

We could not validate the current and proposed cost estimates because the basic data used in the proposal to make the estimates was unreliable. The volume of transactions and the time required to process them are critical elements to the cost estimates. Proposal estimates for both elements are seriously deficient.

The number of transactions to be processed is a key factor in estimating the cost of both the current reservation and ticketing system and the centralized system. For purposes of this letter, a transaction is defined as making a reservation or issuing a ticket.

The proposal estimated annual Government travel transactions at 1.8 million. This estimate was based on the number of Government Transportation Requests (GTRs) GSA audited during a 1-year period. However, the number of GTRs issued does not represent the actual number of travel transactions processed. For example, one agency we visited issued one GTR weekly for all its tickets. The 52 GTRs issued yearly represented about 10,868 tickets. Another agency found that it had twice as many transactions (inquiries, reservations, and changes) as tickets issued. Also, tickets purchased with cash were not considered since no GTR was involved.

The proposal also assumed that 1.8 million transactions represented all Government travel, including travel for the Department of Defense (DOD). An official of the Military Traffic Management Command--DOD's single manager for transportation--estimated that DOD alone issues 1 million GTRs annually, representing about 4 million tickets. So it appears that the Government issues many more tickets than 1.8 million each year. However, the actual volume of Government travel in terms of tickets, transactions, and travel patterns is unknown. The basic travel information that would be needed to effectively manage traffic on a Government-wide basis is not currently collected by an agency.

Underestimating the number of transactions to be processed would understate the proposed system's operating costs. Since the actual number of transactions may be 4 to 5 times larger than the proposal's estimate, a significant increase in personnel and equipment may be needed.

The substantial increase in transactions, for example, may require major computer capabilities rather than the proposed mini-computer. Also, the estimated number of personnel required to operate both the current and proposed systems is probably understated, since the estimate is based on low transaction volume. A Defense Department official estimated that about 500 personnel would be needed to process just Defense travel in a centralized automated system.

The length of time required to process a transaction is also a key factor in estimating current reservation and ticketing costs. The proposal's estimated total processing time is 1.044 hours, based on an informal, undocumented study of a GSA travel office. Airline studies and other Government officials, however, indicated that the total processing time for manual systems is probably about 30 minutes; automated systems are even faster.

The proposal assumes that the GSA travel office is representative of all Government travel offices. Government agencies use many different travel processing systems. Some agencies avoid all travel processing by allowing each employee to make travel arrangements directly with the airlines. Other agencies reduce travel processing by using co-located airline personnel. Some agencies have leased automated airline reservation systems that can reduce processing time to less than 20 minutes per transaction. The wide diversity of travel processing invalidates the proposal's Government-wide extrapolation based on GSA's manual processing system.

The unreliable estimates for the number of transactions and processing time affects the estimates for both current and proposed system costs. The unreliability of these key factors precludes any meaningful evaluation of the proposal's cost estimates. Better, more precise, information must be obtained on volume and processing time before adequate estimates can be made on either current or proposed system costs.

Indirect labor

The proposal correctly recognizes that intermediate personnel such as secretaries and clerks are involved in the travel process. Eighty-five percent of direct labor is used as an estimate for these indirect costs.

As we understand, derivation of the 85 percent factor was based on conversations with airline representatives.

The proposal does not support this estimate and does not specify how a centralized system would eliminate the need for these intermediate personnel. Based on our observations of automated reservation systems currently used in Government, intermediate personnel continue to be involved in the travel process.

Savings in airline overcharges uncertain.

The proposal estimates that the Government currently does not recover \$9 million in undetected airline ticket overcharges. These overcharges are in addition to those currently being found and recovered in GSA's routine audit of transportation payments. The overcharge estimate is based on a study of selected travel vouchers made by a private company. However, the sample used in the study was highly biased and was expected to have a high incidence of fare computation errors. For example, most of the vouchers showed travel to two or more locations on two or more airlines which is a type of travel particularly susceptible to fare computation errors. The 104 sample vouchers used for the study are not typical of most Government travel, and the sample was not large enough to be statistically valid.

While the savings, if any, are uncertain from automatic verification of fares, we believe such a verification feature has merit. It would better assure the Government of the validity of fare charges and would further simplify current audit procedures.

Equipment costs

The centralized system equipment costs were estimated to be about \$960,000. The estimates for software/hardware were based on informal discussions with prospective suppliers, and specific requirement lists were not developed. The estimates included funds for more closely defining the problem and developing requirements.

The equipment costs were based on the proposal's estimate of travel volume. As previously discussed, the present proposal may considerably underestimate the number of transactions involved. In contrast to the proposed equipment estimate of \$960,000, a DOD official estimates that a \$30 million investment in hardware/software plus \$13 million to \$15 million annually would be needed to operate a centralized travel system to serve only DOD personnel.

Furthermore, the proposal's equipment estimate was only preliminary and apparently based on a misunderstanding of the system's concept. The prospective supplier said that the estimates were for a prototype of a regionalized, not a centralized, system. Additional systems would be needed in each GSA regional office after prototype development. Therefore, the problem would have to be more accurately defined and more specific requirements would have to be developed before any equipment costs could be accurately forecasted.

Organizational constraints need attention

Before serious consideration can be given to implementing a centralized automated reservation and ticketing system, we believe numerous organizational problems should be addressed. Abandoning independently developed agency reservation and ticketing systems in favor of a GSA centralized system is a major change which requires planning, coordination, and consensus. As suggested by the proposal, the Office of Management and Budget (OMB) or GSA could compel other executive branch agencies to use a centralized system; however, a preferable approach would be to secure voluntary participation and cooperation from the affected agencies.

Need to overcome resistance to change

From a practical viewpoint, agencies may resist change and oppose turning their travel service functions over to GSA. In the past agencies have individually developed systems for processing travel. GSA has only provided guidance and suggestions.

An example of resistance to change concerns the reluctance of some agencies to adopt automatic airline ticket payment plans and teleticketing procedures, although these techniques have been shown to be cost effective. Moreover, because ticketing and reservation systems are important to an agency's operations, assurance must be given that a centralized system would perform effectively without interruption. Interagency coordination would provide such assurance and ease the resistance to implementing a new system.

Agency travel needs must be identified

Agencies have independently developed travel procedures to meet their needs. These needs differ and would have to

be determined and analyzed. For example, DOD travel represents over half of the Government's total travel requirements. DOD travel needs are different from those of civilian agencies, as evidenced by the provisions of DOD travel regulations. Any proposed system would have to be coordinated with DOD and other agencies. By doing this, potential interface problems would be identified and resolved. We believe that the varying travel needs can only be identified through wide participation of all agencies in the planning and designing of a new system.

The current proposal has not, in our opinion, given adequate consideration to agencies' specific needs.

Cooperation needed to solve interface
problems concerning agency accounting
systems

The proposal does not discuss how airlines are reimbursed. Some agency accounting systems restrict the way airlines are paid. For example, one agency that we reviewed has an automated centralized system for the Washington, D.C., area; however, budgeting and accounting procedures in this agency require each bureau within the agency to individually make payments to the airline. Differences in agency accounting systems and payment procedures indicate the need for a cooperative agency effort to consider these problems.

Proposal system technically feasible

The proposed system appears technically feasible because of its similarity to systems used by major airlines and leased to Government agencies and private corporations. Most officials with whom we discussed the proposal acknowledged the technical feasibility of such a system.

Using computers to provide real-time reservation and ticketing services is clearly feasible as demonstrated by the airline systems. Visual display units, telephone communication with travelers, and the ability to instantly issue tickets via teletype machines have been used successfully throughout the country. In addition, the proposal offers potential for more meaningful travel management reports combined with better accounting and paying procedures.

Automated systems have allowed reservation and ticketing personnel to increase productivity. The problem of handling increased numbers of passengers and the ability to rapidly process transactions have been made possible by adopting these systems. However, a number of technical questions remain to be resolved before this proposal could be implemented in the Government. For example, equipment requirements to cope with emergencies and demand surges must be determined.

Alternative methods not considered

The proposal assumes that a single Government-wide reservation and ticketing system is the only viable alternative to present methods. However, there are a number of potential alternatives that could be considered. Some of these alternatives include:

- Expanding use of airline-developed automated reservation systems. Several Government agencies and private sector corporations use airline-developed systems which essentially do everything that the proposed system envisions only on a smaller scale.
- Expanding agency use of scheduled airline ticket offices, which are staffed by airline reservation personnel and currently located in many DOD and civilian installations.
- Expanding agency use of teleticketing machines and automatic payment provisions. This could provide savings in reservation and ticketing. GSA has recommended these techniques for several years, but not all agencies have adopted them.
- Establishing multiagency, regional, or metropolitan area automated reservation and ticketing systems similar to the proposed system, but on a smaller scale. The increased capacity of the airline systems offers the potential for several agencies to use a single system and share the costs. DOD officials at the Military Traffic Management Command said that recognizing the advantages of airline-developed systems has led to the Command considering a DOD-wide ticketing and reservation system.

--Permitting Government travelers to independently make travel arrangements without agency assistance, decreasing the direct involvement of Government personnel.

In our view, the benefits and costs of all feasible alternatives should be considered before recommending any particular method.

COST SHARING NEEDS CONSIDERATION

An additional underlying consideration in evaluating alternative methods is the extent to which airlines or the Government should bear the cost of this activity. These costs are normally considered an airline responsibility, and they are part of the cost base used by the Civil Aeronautics Board to establish fares. In providing reservation and ticketing services, the Government seeks improved administrative control over travel and convenience to Government travelers. On the other hand, the Government relieves the airlines of considerable costs that they would otherwise incur. Also, Government airline tickets at full fare are usually paid promptly, avoiding any lessened revenue to carriers from paying travel agent, bank, and entertainment card commissions. Consequently, the relative costs to be assumed by the Government and the airlines would require extensive consideration.

PRIVACY ACT IMPLICATIONS NOT CONSIDERED

Since the Government-wide reservation and ticketing system would contain personal information--names of individuals and locations to which the individuals travel--the system would fall within the purview of the Privacy Act of 1974. The Privacy Act was enacted as a safeguard against the threat posed to individual privacy by the Federal Government's collection and use of personal information, and it imposes certain requirements upon agencies. The administrative costs for implementing these requirements would add to the cost of the proposed system.

CONCLUDING COMMENTS

The results of our evaluation were discussed separately with GSA officials and with the individual who submitted the proposal. No major disagreement was expressed about the findings presented in this report.

The individual who made the proposal acknowledged the limitations of his estimates. He said that the proposal was the best that could be developed, considering the difficulties in obtaining travel information and the limited time and resources he was allowed to devote to the study. He continued to support the centralized concept.

Notwithstanding the limitations of the present proposal, this individual has made a valuable contribution to ongoing efforts to improve Government travel management by focusing attention on the potential of a centralized travel system. GSA started an internal study on several reservation and ticketing alternatives, including a centralized system.

We believe that when the study is completed, OMB and GSA should jointly consider what actions would be appropriate to see that Government departments and agencies fully consider the possible benefits and savings from the Government ticketing and reservation system. Also, we suggest that OMB and GSA examine the extent to which current costs of the Government ticketing and reservation function are equitably divided between the Government and the airlines.

Your office requested that we make no further distribution of this report until you have had an opportunity to review it and to prepare a response to the individual who submitted the proposal. Your office also indicated that you may request OMB to study some alternative concept. After you have responded to the above individual, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,



F. J. Shafer
Director