Computerized Control of Travel Expenses

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Recommended Citation

Control of business travel expense is neglected in many organizations, partly, at least, because the clerical cost of such control is so high. The solution may lie in the use of a computer.

COMPUTERIZED CONTROL OF TRAVEL EXPENSES

by Michael R. Tyran

General Dynamics Corporation

BUSINESS travel is a "sleeper" expense that usually fails to receive the emphasis appropriate to it when management evaluates the financial aspects of operations. This is not to say that travel costs are ignored but rather that their significance is blurred because they are included in broader categories of analysis and reporting.

In the aerospace industry in particular, direct travel (associated with a contract requirement) is typically part of the "other direct cost" element in the accounting system, and indirect travel expense (overhead-type activities such as seminar attendance, professional

meetings, etc.) is an account within the total overhead classification. Without specific attention to the segregation and review of travel costs its effects on the total cost of doing business cannot be measured. This neglect may lead to profit dilution as well as to poor planning and control in the travel activity itself.

Few realize how much it actually costs an organization to support the travel operation in its aggregate total. Not only the direct costs but also the effectiveness with which travelers' time is utilized must be considered. Effective surveillance and control of travel activity are

a must if maximum benefit at lowest cost is to be achieved from business travel expenditures.

Problem

In assessing the travel reporting needs of the Pomona Division of General Dynamics Corporation, the financial staff found that the cost of manual preparation of adequate and timely control reports was prohibitive. To exercise adequate control the following information had to be available:

1. Identification of travelers by organizational units for expenditure responsibility and monitoring

2. Determination of overall division cash advances for planning of commitments and measurement of the effect on cash requirements

3. Analysis of the need for and validity of the trip from top management's point of view

4. Evaluation of commonality for trips and destinations in order to see, for example, whether distant trips could be consolidated with one person performing more than one activity, as in the case of customer and vendor liaison

5. Assessment of the number of individuals traveling to the same seminars and conferences and resolution of the pros and cons, particularly in the case of indirect personnel

6. Information on outstanding advances and travel account delinquencies

7. Ability to summarize for each functional executive the extent of his subordinates' travel and the attendant cost—a reporting tool that would provide him with a basis for control

Mechanization

To meet these needs with a minimum of clerical effort and cost, it was decided to develop a mechanized travel reporting system as a means of reviewing and evaluating the amount of traveling being done and measuring its effects on the cost of doing business and on the attainment of operational objectives. The resulting computerized system, which is described in this article, gives management timely information on the following aspects of travel activity:

1. The number and type of employees (direct or indirect) on travel status and the durations of their trips

2. Identification of each traveler by organizational unit within the president's executive staff functions

3. The purpose of each trip and the specific destinations to be visited

4. The type and amount of each advance made and the effect on the cash flow

EXHIBIT A

Manually Prepared Travel Documents

5. Travel costs and company unreimbursed advances outstanding.

Former system

Under the system in effect before computerization, when an individual was required to make a business trip he prepared a travel order (as shown in Exhibit A on this page) and submitted it to his organization for approval. If he needed an advance, he would present the travel order to the cashier, who entered the amount of the advance on the same document after the money was paid. This information was forwarded to the travel section, which posted it to the employee travel register (which is also shown in Exhibit A).

After completion of the trip the employee prepared a travel report (illustrated in Exhibit A) indicating the details of the trip, the expenditures incurred and allowed, and the amount due him or the company. These data were also for-

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MECHANICAL TRAVEL ANALYSIS SYSTEM

EXHIBIT B

chanical procedure is outlined in Exhibit B on this page. As the exhibit shows, the procedure is rather simple; the major part of the processing involves the sorting and manipulation of input into the file records.

The primary input into the system is shown in Exhibit C on page 35. It includes such pertinent information about the traveler as his employee number and organizational unit, the executive staff member to whom he is responsible, the travel order number, the charge number, the reason for the trip, the destination, the amount and type of advance, the duration of the trip, etc. This document is prepared by the travel section and submitted to the keypunch group along with such other data associated with travel expenses as return of cash and liquidation of advances.

Future program controls, not completely implemented at this time, will edit and audit the input data. The audit file will check the traveler's staff identification (the responsible executive staff member), organization, and type of employee classification (direct or indirect) by matching the employee number entered against the file. A mismatch will cause the data to be rejected and listed on a suspense report for correction and resubmission.

Certain program tables had to be constructed in order to reduce the amount of input detail. These processing parameters are shown in Exhibit D on page 35. Codes were assigned to each executive staff member, destination, reason for trip, and type of advance and to certain transactions. The input of a given code into the system, if valid, results in an action (transactions X and B, as shown on the exhibit) and/or triggers the output of the narrative description—specific executive staff designation, destination, and reason for the trip.

Computer processing
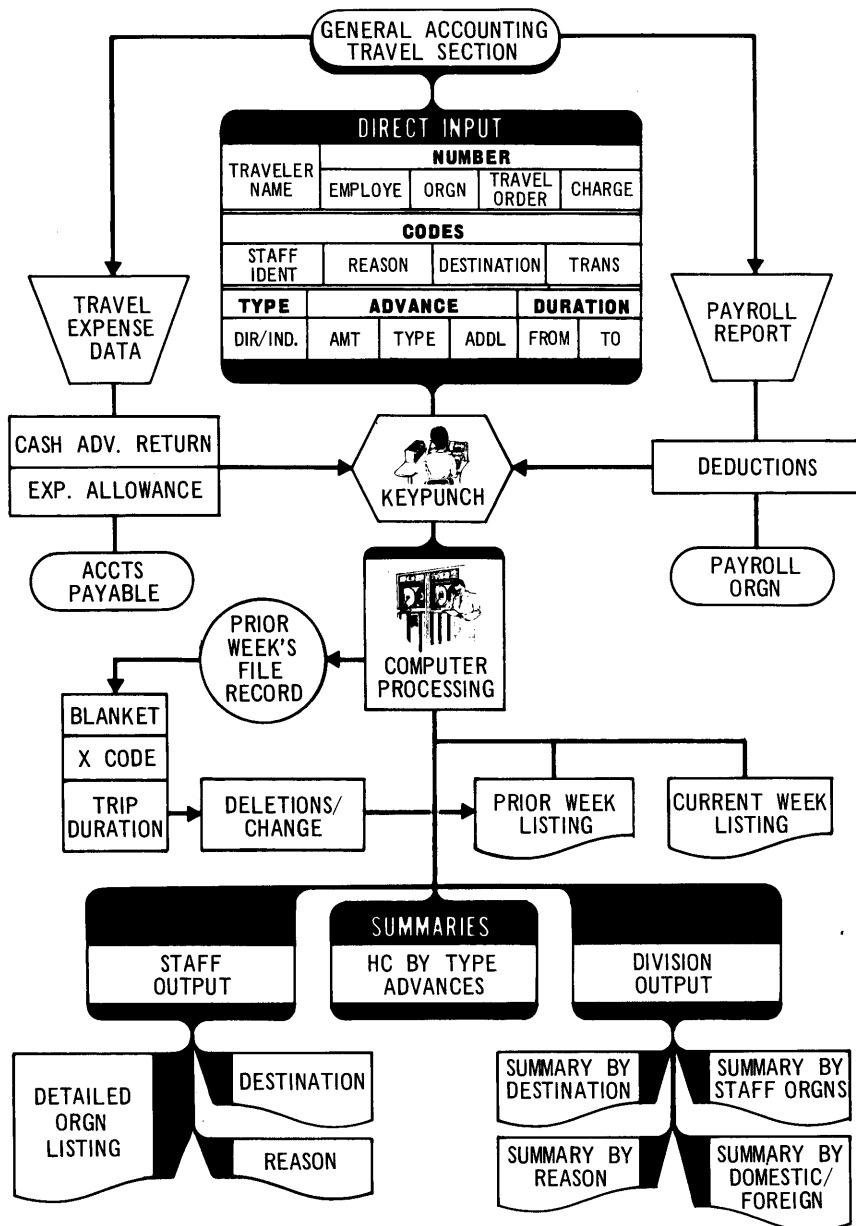
All the travel information is stored on tape. The following pro-

warded to the travel section for posting in the employee travel register.

At the end of the month a trial balance was prepared from the employee travel register summarizing the status of each employee's account as well as the "advance" position, etc., for the division as a whole. The trial balance and the other detailed records maintained provided the basis for journal vouchers, corporate status reports, and direct payroll deductions

(when time criteria for reimbursement were not met). Only in isolated cases was any attempt made to prepare travel analysis reports such as those that are described in the latter part of this article.

Current system

Under the current procedure most of this process is computerized. (The travel order and expense report, however, are still prepared manually.) The basic me-

TRAVELLER NAME	TRANS		EMPLOYE NO.	ORGN		STAFF IDENT.			DIR/IND	TVL O NO	CHG NO	
M. R. Smith	B	BLANKET CODE DELETION	72640	27	QUALITY ASSURANCE	BB	VP ENGRG		D	1550	165	DIRECT CHARGE
H. M. Jones	X	ADVANCE AMOUNT CHANGE	56421	10	CONTROLLER DEPT.	CC	CONTROLLER		I	139	600	OVER-HEAD

RSN CDE		DEST CDE		ADV AMT	TYPE ADV		ADD ADV COD	DURATION OF TRIP FROM	TO	
2	TECH LIASON WITH CUSTOMER	B	NYC AREA	100	1	PETTY CASH —	NO WIRE ADVANCE	08/15/67	08/18/67	NOT REPORTED IN SUBSEQUENT WEEK
3	CONTRACT NEG. W/ VENDOR	C	HUNTSVILLE, ALA.	50	3	TRAVELER'S CHECK —		08/20/67	09/10/67	REPORTED IN PRIOR & CURRENT WEEK'S ACTIVITY

EXHIBIT C

PROCESSING PARAMETERS

TRANSACTIONS

CODE	DESCRIPTION
B	TRAVELER DELETION
X	ADJUSTMENT OF ADVANCES

EXECUTIVE STAFF REPORTING

CODE	LEVEL
AA	PRESIDENT
BB	VP-OPERATIONS
CC	VP-ENGINEERING
DD	CONTROLLER
EE	DIR. IND. RELATIONS

DIRECT CHARGE IDENTIFICATION

ACCT	
164 165	DIRECT PERSONNEL & CHARGES

REASON FOR TRIP

CODE	DESCRIPTION
1	IND. ASSOC. CONF/SEMINARS
2	TECH. LIASON W/CUSTOMER
3	CONTRACT/NEGOTIATIONS W/VENDOR
4	DIRECT CHARGES
5	CUSTOMER NEGOTIATIONS

DESTINATION

CODE	LOCATION
A	WASHINGTON, DC., VA., MD.
B	NYC AREA
C	HUNTSVILLE, ALA.
D	FT. WORTH, TEXAS
E	EL PASO, TEXAS (FT. BLISS, ETC.)

ADVANCE IDENTIFICATION

CODE	DESCRIPTION
1	PETTY CASH
2	GENERAL DYNAMICS CHECK
3	TRAVELER'S CHECK

EXHIBIT D

DETAILED OUTPUT REPORTING

TRAVEL ORDER ANALYSIS AND SUMMARY

CURRENT AND PRIOR WEEK LISTINGS

TRAVELER NAME	CHARGE NO.
TRANSACTION	REASON CODE
EMPLOYE NO.	DESTINATION CODE
ORGANIZATION	ADVANCE AMOUNT
STAFF IDENT.	TYPE ADVANCE
DIR/IND TYPE	ADDL. ADV. CODE
TRAVEL ORDER NO.	DURATION OF TRIP

CURRENT AND PRIOR WEEK LISTINGS

SUMMARY AT END OF REPORT

NUMBER OF TRAVELERS BY TYPE

DIRECT	3
INDIRECT	2
TOTAL	5

ADVANCES OUTSTANDING

CASH	$150
GD CHECK	200
TRAVELERS CHECK	50
WIRE	200
TOTAL	$600

DIVISION SUMMARIES

EXECUTIVE STAFF ORGANIZATION	DESTINATION	REASON FOR TRIP
STAFF IDENTIFICATION AND CODE	DESTINATION DESCRIPTION AND CODE	REASON DESCRIPTION AND CODE
NUMBER OF TRAVELERS BY TYPE (DIR OR IND)	NUMBER OF TRAVELERS BY TYPE (DIR OR IND)	NUMBER OF TRAVELERS BY TYPE (DIR OR IND)
TOTAL TRAVELER ADVANCES BY STAFF ORGN.	TOTAL TRAVELER ADVANCES BY DESTINATION	TOTAL TRAVELER ADVANCES BY REASON

SUMMARY

NO. TRAVELERS____DIRECT____INDIRECT____TOTAL____TOTAL ADVANCES____

EXHIBIT E

Special processing parameters were entered to reduce the amount of input detail. Input into the system of a given code, say, X or B, results in an action and/or triggers the output of a narrative description.

cedure governs its processing:

An entry coded B is made for an individual traveling on a "blanket order," which indicates that the duration of the trip is flexible and/or that a number of trips are authorized against the same travel order. The program searches the previous week's file record for B-coded identifiers and, if it finds them, deletes the traveler from the file. The B-coded record is no longer valid for the current period's reporting because a traveler in this

category comes and goes at infrequent intervals and generally does not have advances outstanding. As a matter of procedure, if a traveler does not have an advance on his initial departure and he is on a blanket order, his name and trip acknowledgment are not listed on the input into the system.

An X code entry on the input signifies that there is an adjustment to be made to the amount of the traveler's advance. The adjustment can result from "unused advance

TRAVEL EXPENSE PROCESSING

CURRENT PROCEDURE
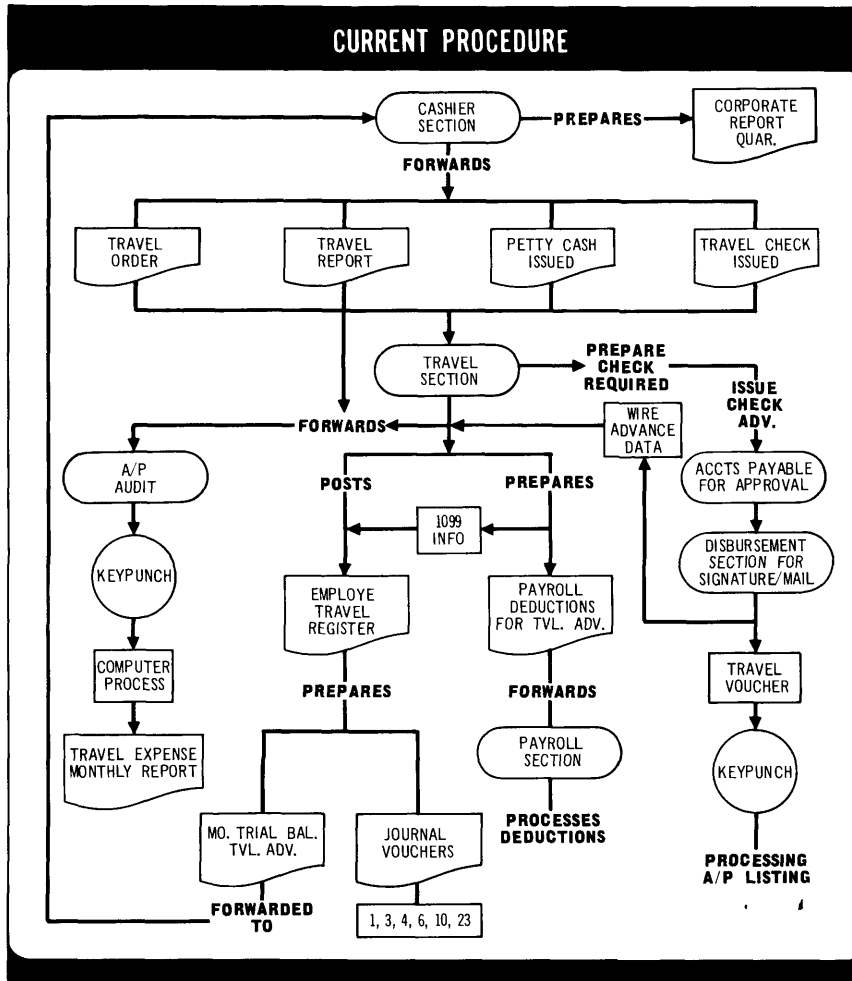
EXHIBIT F

A planned addition to the computer program will automatically adjust the records of expense account advances; this information will be available in the computer file from the expense reporting system.

returns" or travel expense report submissions. A search is automatically made for X-coded entries; when one is located, the program adjusts the traveler's "advance amount" to the new input amount. The purpose of this procedure is to reflect at all times the exact amount of traveler advances outstanding. A future addition to the computer program will automatically make this adjustment to the record because the changes in the advance status account will be available in the computer file from the travel expense reporting system.

To process the input related to

the duration of the trip, the computer adds six days to the return date in order to determine whether the individual is to be listed in the current period's (or the prior week's) activity reporting. (The six days represent an arbitrary parameter to include those travelers who may have overextended their trips.) If the adjusted date precedes the current reporting date, the traveler's record is deleted from the file. If the adjusted return date is later than the reporting date, the record is listed. For example, suppose the date of return is September 21. Six days are added to calcu-
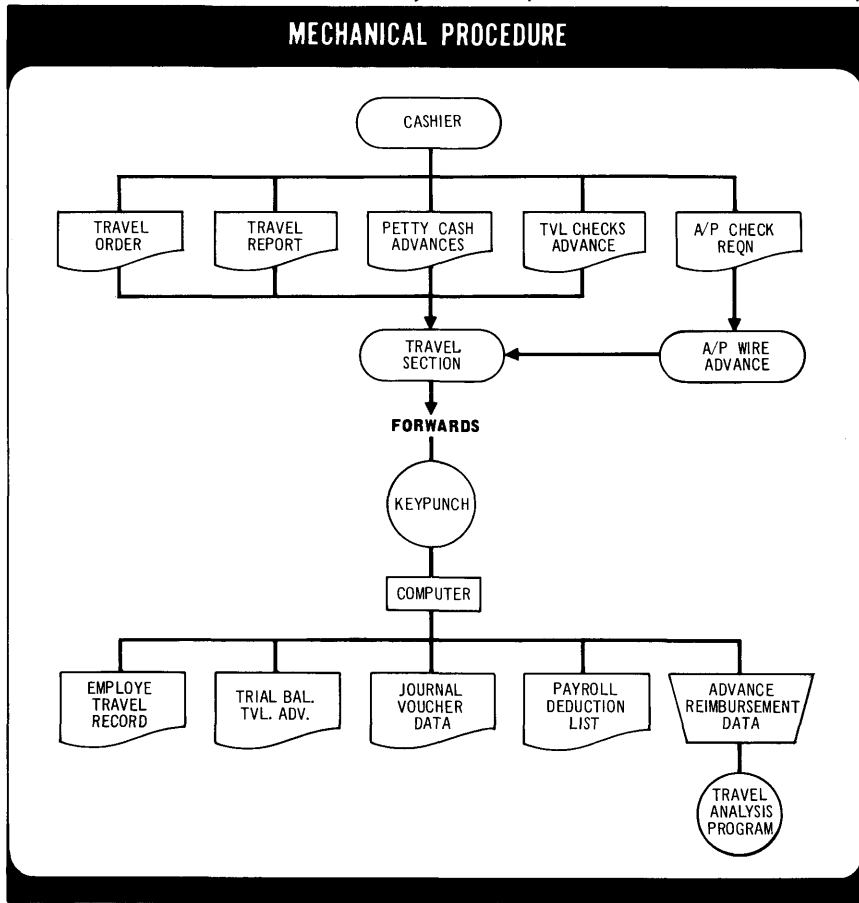
MECHANICAL PROCEDURE

EXHIBIT G

late the adjusted date. Then the action date for deletion purposes is September 27. If the date of the report is September 28, the record is deleted. If the return date had been September 30, on the other hand, the traveler's name would be listed in the prior week's report, indicating that the individual was still on travel status on the report date.

The computer reports and summarizes direct, indirect, and total travelers for both the current and prior week. If a traveler's name is reported more than once, it is counted only as one in the total reported head count.

The program also summarizes the advances and reports this information in total at the end of the report listing, as shown in Exhibit D. Advances made in cash, by company check, or by traveler's check are identified separately to distinguish them from cash and checks issued to the traveler at the time of his departure.

The program file records are also processed by destination identification and summarized by number of individuals traveling to each location. The number of different locations visited determines the head count totals. For example, if a person traveled to three different locations, head count totals would include the individual in three destinations, and he would be reflected in the aggregate total head count as three.

The "reason for trip" classification is summarized in much the same way. The head count summary total depends on the number of different reasons for each individual's travel.

Travel data also are summarized by "executive staff organization." This data sort reports the total number of employees and travel advances classified by the executive staff members to whom they report. Travel data for the subordinates of each executive staff member are reported on the president's portion of the staff travel report. ·

Travel information is segregated by executive staff organizational unit and listed in detail for each staff member so that he can analyze the travel performed within his own group. Trips are summarized by destination and by reason for trip.

Travel report data indicating expense entitlement, return of unused advances, and traveler reimbursement (as appropriate) are totaled and compared to the travel analysis reporting record of advances to obtain the net outstanding. This amount is reported in subsequent listings and summaries.

The computer program also can report output based on account number input. When the input indicates accounts 164 and 165, for example, the traveler type will be mechanically identified and reported as direct, and the reason for the trip will always be classified as "other direct charges." This procedure not only decreases the amount of input required but also assures proper classification of traveler and reason for trip through an account identifier.

Output

Each week three basic groups of reports are issued. Some of these are shown in Exhibit E on page 36.

The travel order analysis and summary report (illustrated in Exhibit E) lists all the detailed traveler data from the input submission in two sections—prior week's adjusted record and current week's input. It provides management and accounting and supervisory personnel with a detailed review of traveler status in the division. The sum-

mary indicates the total number of travelers by type (direct or indirect) and the amount of advances. This report is used primarily for reference—to find out who is traveling where, why, and with what amount of advance.

The division summaries by staff, destination, and reason are also indicated on Exhibit E. They permit management to review rapidly the number of travelers by specific staff organization identification, by the different locations being visited, and by the various reasons for travel; to evaluate overall divisional travel activity; and to take action if needed.

Sectional reports (not shown) are prepared for the various staff executives reporting to the president for their use in reviewing their subordinates' travel activities and status. These reports are basically similar to those prepared for overall division reporting. Their detail supports the summaries received by top management.

Travel expense reporting

Mechanical accumulation, recording, and reporting of information about travel expenses would also be desirable. This processing has not yet been put on the computer, although it would not be difficult to do so.

Under the present system, shown in Exhibit F on page 37, the cashier section forwards the travel order and report and the cash and check issue documents to the travel section. The travel section in turn performs the following functions:

The travel section forwards the travel report to the accounts payable audit group, which performs the audit function and batches the reports for transmittal to the keypunch group. The data are processed by computer, and a monthly travel expense report is produced. This report contains the amount of advances outstanding for each traveler listed by employee number, general ledger account, voucher number, and due date.

From these documents the travel

section posts the pertinent traveler information to the employee travel register for control and reporting purposes. (The data contained in the register are illustrated in Exhibit A.)

If a wire advance is required, the check to Western Union or the bank is prepared. After the proper approvals have been obtained, the advance is wired or mailed to the traveler, and this information is posted to the register.

When reimbursement of an advance exceeds a prescribed time limit for settlement of advance accounts, a payroll deduction report is prepared authorizing the payroll section to deduct what is owed the company from the employee's salary. The amount that can be deducted from any one paycheck is limited to a pre-established total. This information is posted to the travel register.

At the end of the month a monthly trial balance is prepared reflecting the following information: the name of the traveler; his organization and his employee number; the current month's advance balance outstanding; outstanding balances for the periods of 31-60 days, 61-90 days, and over 90 days; travel order and report numbers; and journal vouchers concerned. This information is summarized from the employee travel register.

At the end of the month journal vouchers are prepared to reflect the following transactions: travel expense, return of unused travel advances, payroll deductions, interdivisional employee advances, and corrections of invalid data on the mechanical travel expense report.

The accumulation, recording, and reporting of these data to maintain control of travelers' advances and expenses require a great deal of clerical time. Actually, the whole process could be readily computerized with minimum time and effort. Instead of manual maintenance of the employee register, the data could be stored in the computer file and retrieved as required either specifically or via batch report pro-

cessing of trial balances, journal vouchers, and the like. How a computerized system would work is illustrated in Exhibit G on page 38.

Benefits

We have found the computerized travel system easy to understand, install, and operate. The principal benefits may be summarized as:

1. The system provides for detailed computer storage, control, and reporting of travel input.

2. The need for manual record keeping and for clerical manipulation has become minimal.

3. Reporting is timely; processing could even be on a daily cycle if that should be required.

4. Additional reports and specific information can be extracted directly from the computer file record without difficulty.

5. The system provides a means for systematic analysis of travel activity and associated expenses.

6. It gives management a tool for periodically reviewing the extent of travel activity without the need for special studies and analyses.

Furthermore, the computerized travel control system is a preliminary to on line-real time reporting. In the future the transmittal preparation and document submission to the keypunchers will be replaced by a mechanical input/output keyboard device at the participating organization's location. This will eliminate document movement between organizations, facilitate paper handling, save clerical time and effort in preparing input transmittals and in keypunching, and improve the timeliness and accuracy of the reporting.

No progressive organization can afford to overlook the potential of a computerized travel control system. It provides a practical method for evaluating the amount of travel within an organization and assessing the need for such travel and its contribution to the accomplishment of organizational objectives. Furthermore, it is an effective means of financial control of advances outstanding.