TEXAS TRANSPORTATION INSTITUTE

TEXAS HIGHWAY DEPARTMENT

COOPERATIVE RESEARCH

TEXAS A&M TRAFFIC ASSIGNMENT EDIT PRINT TRIP VOLUMES FOR IBM 1401 DATA PROCESSING SYSTEM

PROGRESS REPORT

PROJECT 2-8-63-60

TEXAS A&M TRAFFIC ASSIGNMENT

EDIT PRINT TRIP VOLUMES

for

IBM 1401 DATA PROCESSING SYSTEM

by

William F. Pry

RESEARCH PROJECT 2-8-63-60

INTRODUCTION

The program described on the following pages was prepared to facil-
itate standard origin-destination data processing activity on trip volumes
predicted for some future year. The binary predicted trip volume file is
formatted on an IBM 709/7090 computer and the resulting tape is input
to the IBM 1401 which produces a file usable with Texas Highway Depart-
ment programs.

Donald E. Cleveland
Project Supervisor

TEXAS A&M TRAFFIC ASSIGNMENT

EDIT PRINT TRIP VOLUMES

for

IBM 1401 DATA PROCESSING SYSTEM

I. Identification

Name: Texas A. and M. Edit Print Trip Volumes (TAMEPTV).
Machine: IBM 1401.
Programmer: W. F. Pry.

II. Purpose

TAMEPTV edits and blocks the output from program No. 13, Print Trip
Volumes of the Bureau of Public Roads Traffic Assignment Package.
This output represents zone - to - zone trip volumes.

The output of TAMEPTV is 15-character records on tape. One to
one hundred records may be blocked on each tape record. The 15-
character records have the following format:

character	information
1	Blank
2, 3, 4	Origin Zone
5, 6, 7	Destination Zone
8-15	Trip Volume

All figures are right-justified with leading zeroes.

III. Restrictions

The IBM 1401 used must have the following features:

1. 4000 position core storage.
2. 2 tape drive units.
3. Index registers.
4. Equal compare.
5. Printer.

IV. Method

Following the program in the card reader, a parameter card must
be read specifying the blocking factor (001-100, right justified with
leading zeroes, beginning in column 1). This factor specifies the
number of records contained in each tape record of output.

A record is read from the input tape. If the first character of the record is a 1, then the zone origin is found and held. The next record is passed (documentation record), and the next record read and examined in the following manner.

If the record does not contain a 1 in the first position, then the record is scanned for trip volume. If a node destination has a zero volume, it is not written on the output tape. If the volume is non-zero, then the 15-character record is built and placed in an output buffer. When this buffer is filled, then the buffer is written on tape (i.e., 1-100 records in the buffer).

The last record written on tape may have fewer records than specified by the parameter card. A message is printed giving the length (number of records) in the last output record.

A tape read-write error check routine is included. If a tape transmission error occurs, the operation is re-tried nine times. If after nine tries, the error persists, a halt at 111 or 222 indicates a read or write error, respectively. A start from this point will read or write as above.

V. Usage

Input

As stated in (IV) a parameter card must be read behind the program. The input tape must be mounted on tape unit 1.

Output

The blocked tape will be on unit 2. A message is printed giving the number of records in the last tape record. If the number is zero, then the last tape record contains the specified number of logical records.

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