RECOMP II USERS' PROGRAM NO. 1095

PROGRAM TITLE:	CRITICAL PATH DATA CHECK
PROGRAM CLASSIFICATION:	General
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PURPOSE:	When used in conjunction with RECOMP Program No. 58, SCHEDULE CRITICAL PATH, provides an automatic check for possible violations of data format restrictions. In addition, a provision has been made to allow deletion and/or insertion of activities and corresponding activity times.
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PROGRAM TITLE: CRITICAL PATH DATA CHECK

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1. INTRODUCTION:

This program, when used in conjunction with RECOMP Program #58, SCHEDULE CRITICAL PATH, provides an automatic check for possible violations of data format restrictions of RECOMP Program #58. In addition, a provision has been made to allow deletion and/or insertion of activities and their corresponding activity times.

The program checks data to insure that:

a) All "TO" Events from a given Event are entered consecutively.

b) Each path in the network is continuous.

c) Each Event number appears in the "TO" side of the Activity table before that Event number appears in the "FROM" side of the table.

d) No Event number appears in the "TO" side of the Activity table after that number appears in the "FROM" side of the table.

2. USAGE:

2.1 Read data into memory beginning at location 1000_8.

2.2 Load RECOMP Users' Program No. 1095 tape.

2.3 Set the typewriter margin to 10. Set tab stops at 20, 28, 38, 53, 63, 73.

2.4 If a proof sheet of input data is desired, turn Sense Switch "B" on. Otherwise, turn "B" off.

2.5 Depress "Start 1". The four error tests are made in sequence. If an error is detected by the program, one of the following self-explanatory statements will be typed out:

a) ACTIVITY N IS NOT LISTED CONSECUTIVELY WITH THE BALANCE OF ACTIVITIES FOR THIS EVENT

b) ACTIVITY N HAS A TO EVENT NOT CONNECTED TO THE BALANCE OF THE NETWORK.

c) ACTIVITY N HAS A FROM EVENT NOT APPEARING ON THE TO SIDE OF THE ACTIVITY TABLE FIRST

d) ACTIVITY N HAS AN EVENT APPEARING ON THE TO SIDE OF THE ACTIVITY TABLE AFTER IT HAS APPEARED ON THE FROM SIDE

The computer will halt at Location 0001.0 after an error statement has been typed. In each case, N is a list number beginning at 0 which identifies the activity in error. Each error can be corrected by a deletion, an insertion, or both.

(Note that the change of values of "FROM", "TO", and Activity Times can be accomplished on the console in number fill mode. The memory locations of erroneous data entries can be obtained from the proof sheet.)

2.6 To insert an activity:

Depress "Start 2". The computer will halt at Location 0100.0.

Enter the activity in number fill mode, (as integers) either on the console or on the typewriter. A total of six numbers will be entered for each activity in the following order:

LOCATION	NUMBER
0100	Activity list number
0101	"From" Event
0102	"To" Event
0103	Pessimistic Activity Time
0104	Most Likely Activity Time
0105	Optimistic Activity Time

After the above numbers have been entered and the location counter has been set to 0106, depress "START". The activity will be inserted in the list and the computer will again halt at Location 0100. If there are no other insertions to be made, continue testing by depressing "Start 1".

2.7 To delete an activity:

Depress "Start 3". The computer will halt at Location 0204.

Enter, in number fill mode, the list number of the activity to be deleted. The location counter will be set at 0205.

Depress "START". The activity will be deleted, and all data following the deleted activity will be relocated in order to fill the gap.

If there are no more deletions to be made, continue testing by depressing "Start 1".

2.8 After a complete check has been made; and there are no more errors which can be detected by the program the computer will halt at Location 0151. If a proof sheet of corrected data is desired, depress "START".

2.9 Read RECOMP Program No. 58 into the computer and proceed to computation.

3.0 CODING INFORMATION:

Locations used: $(0000 - 0777)_8$.

4.0 EXAMPLE:

4.1 Proof Sheet

ACTIVITY CODE NO.	FROM EVENT LOC.	FROM EVENT	TO EVENT	ACTIVITY TIMES A	B	C
	1000	100	281			
1	1005	281	384	20	40	80
2	1012	281	4783	220	260	280
3	1017	281	4888	240	320	380
4	1024	281	8385	210	240	290
5	1031	384	584	30	60	100
6	1036	384	486	20	40	80
7	1043	486	686	5	10	20
8	1050	486	5186	5	10	20
9	1055	686	1286	60	80	120
10	1062	686	1186	60	80	120
11	1067	686	2286	40	80	120
12	1074	686	1086	10	20	80
13	1101	686	986	90	140	290
14	1106	686	12686	10	20	80
15	1113	686	786	15	40	140
16	1120	686	886	10	40	50
17	1125	1086	2286	50	100	200
18	1132	786	886	10	50	120
19	1137	986	2286	50	100	200

ACTIVITY 23 HAS A FROM EVENT NOT APPEARING ON THE TO SIDE OF THE ACTIVITY TABLE FIRST

ACTIVITY 20 IS NOT LISTED CONSECUTIVELY WITH THE BALANCE OF ACTIVITIES FOR THIS EVENT

ACTIVITY 10 HAS A TO EVENT NOT CONNECTED TO THE BALANCE OF THE NETWORK

ACTIVITY 43 HAS A TO EVENT NOT CONNECTED TO THE BALANCE OF THE NETWORK

ACTIVITY 23 HAS A FROM EVENT NOT APPEARING ON THE TO SIDE OF THE ACTIVITY TABLE FIRST

ACTIVITY 23 HAS AN EVENT APPEARING ON THE TO SIDE OF THE ACTIVITY TABLE AFTER IT HAS APPEARED ON THE FROM SIDE