1. OPERATIONS

1.1 PDP-10 System

Friday 6 August  End-of-day accounting jobs, which could not run the previous night due to errors in accounting files, 1000-1106
System failure, offline 1655-1712, 1802-1810, 1842-1853.

Monday 9 August  System failure, offline 1017-1035, 1430-1451
Testing of New Batch, 1500-1810.

Tuesday 10 August  Deletion and recovery of disk files showing parity error, 1000-1110
Testing of New Batch, 1410-1804

Thursday 12 August  System failure, offline 2115-2132

Schedule for forthcoming week: Maintenance 0700-0900, 2300-2400
Operations 1000-2130

1.2 GE-225 System

Schedule for forthcoming week: Maintenance 0700-0900, 2000-2100
Operations 0900-2000, 2100-2400

2. RANDOM NUMBER GENERATING SUBPROGRAMS

The Editor wishes to apologize for the incorrect and misleading information that appeared in last week's newsletter regarding random number generating subprograms. These particular routines are only applicable to the PDP-10 and their correct description is as follows.

RAN is a function subprogram which generates single precision random numbers in the range $0 < x < 1.0$

  e.g. VAR = RAN(Ø)

Note that the value of the argument is ignored.
SAVRA\(\text{N}\) and SETRA\(\text{N}\) are subroutine subprograms required to service RAN.

SETRAN is used to provide a non-standard starting point for RAN.

\[ \text{e.g. CALL SETRA\(\text{N}\) (K)} \]

where \(K\) has a value in the range \(0 \leq K < 2^{31} - 1\). The standard starting point is 524287. Note that if SETRAN is not used RAN will return the same set of 'random' numbers each time the program is run.

SAVRA\(\text{N}\) is used to save the integer which would be used by the next call to RAN. Thus a sequence of 'random' numbers produced by RAN can be regenerated if the starting point has been saved.

**Example:**

\[ \text{CALL SETRA\(\text{N}\)(K)} \]

\[ \text{DO I} = 1, N \]

\[ \text{X} = \text{RAN}(\phi) \]

\[ \ldots \]

\[ \text{I} \]

\[ \text{CONTINUE} \]

\[ \text{CALL SAVRA\(\text{N}\)(NUMBER)} \]

\[ \text{DO } I = 1, N \]

\[ Y = \text{RAN}(\phi) \]

\[ \ldots \]

\[ 2\phi \]

\[ \text{CONTINUE} \]

\[ \text{CALL SETRA\(\text{N}\)(NUMBER)} \]

\[ \text{DO } 3\phi = 1, N \]

\[ Y = \text{RAN}(\phi) \]

\[ \ldots \]

\[ 3\phi \]

\[ \text{CONTINUE} \]

To produce a random integer in a given range the following could be used

\[ K = 1000\times\text{RAN}(\phi) \]

The following sample program uses SETRAN with a non-reproducible argument. RAN may then be called to produce a series of random numbers.

\[ \text{INTEGER HRS} \]

\[ \text{CALL TIME (NOW)} \]

\[ \text{DECODE (5,1\phi,NOW) HRS, MINS} \]

\[ 10 \]

\[ \text{FORMAT (I2,1X,I2)} \]

\[ K = \text{MINS}\times10\phi + \text{HRS} \]

.2.
C THIS SCRAMBLES THE TIME
CALL SETRAN (K)
C THE STARTING VALUE DEPENDS ON THE
C TIME OF DAY AND IS NOT PREDICTABLE
...
X = RAN(∅)
...

3. OVERLAYS

Users should be aware of a change in specification of the overlay command in the new batch system. The reason for this change is to permit specification of files to be incorporated in the overlay. (Refer to Chapter 2 of MNT-12 PDP-10 Utility Programs). Until the New Batch is implemented would users please indicate on their Job Identification Card that Overlays (which must be in the form for the present Batch) are used in their program, so that these jobs can always be run under the old batch system.