

# T E N N A T A N

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## - THE WOFFORD CONNECTION -

Wofford College Computer Center

Spartanburg, South Carolina

### BII Improvement.

The TIM(X) function in BII has been extended as follows:

<u>When X is</u>	<u>TIM(X) is</u>	<u>example</u>
1	month number	10 (for Oct.)
2	day of month	5 (5th day)
3	year number	70 (for 1970)
4	year-month-day	70105
5	user number	1974075*
any other value	execution time in 1/6ths of second	10 (for 10/6 sec execution time so far in program)

\* The initial letter is replaced by its alphabetic sequence number.

### New Statistics Program.

NONREG\*\*\* -- A FORTRAN program for performing a regression analysis of  $n$  observations on  $k$  independent variables ( $n(k+2) \leq 1000$ ), given any model with not more than ten parameters to be estimated. The program works from files in standard format for the statistics package developed by Dana Quade at UNC. For further information see file sheets TSL 6.9 in the Computer Center.

### Usage.

The total connect time for September 1970 was 176.6 hours. This is to be compared with 90.77 hours in September 1969, 41.6 hours in September 1968 and NO hours in ANY year before that! There were eighty different users this month, most of whom came from the following courses: Math 11, Science 1-H, Psychology 205, Computer Science 1, Physics 82 and Physics 61. Students from other classes have also been using the computer on their own initiative to solve problems or analyze and plot data.

## Plotter.

Three plotter programs described earlier have been added to the C-A-C library. They are:

**FPLOTT** for plotting functions specified in the form  $Y = f(x)$ . The specification must begin in line number one and may use as many of the lines 1 - 999 as desired. Variable names beginning with F and K have not been assigned in the program and may be used in specifying the function. This program performs automatic scaling and plots on a 10 x 15 grid with 1, 2 or  $5 \cdot 10^n$  units per division. Axes with optional tic-marks are added. Enter your function and type RUN. You will be asked to supply the minimum and maximum values for X and the step-size (DELTA-X) to be used in plotting.

This program can also be used to plot data points, if Y values are given for equally spaced X values. Use the following procedure:

```
1 READ Y
2 DATA Y1, Y2, Y3, Y4, Y5 ...
3 DATA ....
```

A similar approach can be used in reading files. Furthermore, extra variables in the file may be ignored, as in:

```
0 FILE RECORD
1 READ FILE 1, K, K, K, Y, K, K, K, K
1108 RESTORE FILE 1
1198 RESTORE FILE 1
```

Cumulative plots of data from a file may be handled as

```
0 FILE STUFF
1 READ FILE 1, K
2 Y = Y + K
1108 RESTORE FILE 1
1109 Y = 0
1198 RESTORE FILE 1
1199 Y = 0
```

Of course Y may also be specified as any function of the variables read from your file or files.

In each of the above cases, it is convenient to have X run from 1 to N in steps of 1 where N is the number of points to be plotted.

**AFDRW** plots a user specified function of X on axes with specified limits. The user also specifies X-MIN, X-MAX, and a precision which determines the accuracy and speed of the plot. Since, with this program, the user has control over the axis limits, he may plot several functions of the same coordinates. Variables beginning with F and K may be used to specify the function.

**CHGEN** draws user-supplied strings. RUN for instructions.