

# TERMINAL FILE

-THE WOFFORD CONNECTION-

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## Summer Research

This was the busiest summer the computer center has had. As in the past, all users have agreed to use the terminal during non-prime hours. This saves about \$1500 and, although it causes some inconvenience, has not prevented at least three research projects from using the computer frequently.

Dr. Donald Scott, Steve Fulmer and Chrys Harris made frequent use of the computer to analyze data taken in their COSIP-supported research on thermoregulatory behavior of rats. In addition to the statistical analysis, they used a three dimensional model and the plotter to obtain visual display of possible patterns in the data.

Dr. Ray Leonard, Terry McGuinn and Rick Williamson also found the computer to be an important tool in their COSIP-supported research efforts to determine the effects of neurohumors on the growth rate of hydra. They made use of a program written by Dr. Robinson to calculate and plot growth rates determined from their data taken under various conditions.

Dr. Dan Olds developed a computer program representing various models for use in teaching thermodynamics. One result is a program called PVTEXP which allows the user to perform about 45 different types of experiments involving the thermodynamic variables pressure, volume, temperature and heat flow. The design of the experiment and the analysis of results are purposely left to the student.

## Foxworth Returns

Mike Foxworth, class of '69, now teaching statistics in the School of Business Administration at USC, stopped in this summer with a recommendation. He has very good success with his students using the program MLREGR\*\*\* and teaching about multiple regression. Full instructions for the program may be obtained by listing MLRINF\*\*\*, but this listing lacks Mike's enthusiasm. He left a tape copy of the minor modifications he has made in this program to improve its output and utility as a teaching tool. He makes use of the technique of "dummy variables" to select and identify the effects of individual variables, controlling for all others. Unfortunately, the present program is in BASIC and uses DATA statements rather than files. However, Mike recommends it because its output is more appropriate for business statistics than the outputs of other programs currently available.

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3DPLOT\*\*\*

This BII program is now in the system library. It makes use of the Hewlett-Packard 7200A plotter to make a perspective drawing of a user-supplied function of two variables. The function is specified in the form  $Z(X,Y)$  and the corresponding surface is represented by drawing on it a grid of lines of constant X crossed by lines of constant Y. This grid is drawn by the plotter, using a perspective projection. Options available to the user are indicated by the following questions to which the user must reply:

ENTER X-MIN, X-MAX, DELTA-X, Y-MIN, Y-MAX AND DELTA-Y FOR PLOTTING GRID LINES?

ENTER X, Y, AND Z COORDINATES OF THE OBSERVATION POINT?

DO YOU WISH TO SPECIFY A POSITION FOR THE ORIGIN?

If the answer is yes: ENTER POSITION FOR THE ORIGIN?

DO YOU REQUIRE THE SAME SCALING FACTOR ON BOTH AXES?

HIDDEN LINES SHOULD BE (1) OMITTED (2) DOTTED (3) DASHED OR (4) SOLID. WHICH NUMBER?

Additional instructions on the use of the program may be obtained from Dr. Olds.