

A PROTOTYPE TO ILLUSTRATE INTERACTION  
WITH A PERSONNEL DATABASE

by

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NEXT TO GOD, THY PARENTS

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CHAPTER I  
INTRODUCTION

The report deals with the implementation of a prototype interactive database management system for the College of Arts and Sciences. The goal of this report is to provide a demonstration system using the interactive language APL, because of the low cost, ease of use and availability.

At present the University Data Processing Center provides the office of the dean with two copies of the annual budget report. One of these copies is kept in the dean's office, while the other one is separated and sent to the respective departments. There are a total of 24 departments in the College of Arts and Sciences. The listing of each department consists of the names of faculty, staff, their salaries, service record, allocated dollars, free dollars, allocated tenths, free tenths, social security number, etc. All changes in this huge list are made by hand and old information is scratched by pencil. The respective changes are made in the dean's copy as well as in the individual department's copy at the same time by two different people and this could lead to serious discrepancies. The errors may occur in both copies and can go undetected for a long period of time. They may be caught at the end of the fiscal year. Tracing of all such errors can be very time consuming and frustrating.

The main idea of this report is to design and implement a prototype interactive system which demonstrates the possibility of maintaining such a database using an interactive system. The system by no means solves all the problems of maintenance faced by the dean's office.

The system has been programmed, tested and tried by several people, program listings are available from the Department of Computer Science. A separate project [4] has been developed in the department which would on production basis more or less solve all the problems faced by the dean's

office. The system was developed using COBOL and IDMS. It is a conventional batch system rather than being interactive. This batch system manipulates and provides more detailed information as compared to the interactive system discussed in this report. Some of the additional information handled by the batch system as opposed to the interactive system is employee's present address, sex of an employee, retirement plan, accumulated service salary, FICA, etc.

CHAPTER II  
READER'S GUIDE

The report has been organized essentially as described below. The sections below deal with the general information, recommended for study by the novice user and technical information to be read by computer science personnel and programmers in particular.

1. General Overview Discussion:

This section gives an overview narrative of the system. The system has been described in very broad terms and should be readable by all novice users.

2. Principles of Interactive Systems - (concepts):

Prime objectives of interactive systems have been discussed, which all good interactive systems should have. The concepts have been described in general, readable by all novice users.

3. System Evaluation:

The system has been evaluated regarding its limitations concerning the programmer and the user in general. The user limitations have been discussed from the problem view point (functional limitations).

4. General User Information:

The system has been described, in terms of the different commands which the user might use, in order to update or interrogate the information in the database. A general flow of the system has been shown, using proper system commands which are executed, to do the work. Workspace organization has also been discussed in general, along with the procedure to correct mistakes and information input procedure.

5. Appendix I - (Execution examples):

Appendix I includes all the execution examples of the user commands. Each command has been executed a number of times to show the successful



and unsuccessful executions of a single command. Commands have been executed by using long and short names interchangeably.

System commands have been executed and their effect has been shown, at the very end of the Appendix.