

1 994023424

N94-27927

**ADP Analysis Project
for the
Human Resources Management Division**

by

**Professor Robert L. Tureman, Jr.
Computer Information Systems Department
Paul D. Camp Community College
Suffolk, VA 23434**

ABSTRACT - The ADP (Automated Data Processing) Analysis Project was conducted for the Human Resources Management Division (HRMD) of NASA's Langley Research Center. The three major areas of work in the project were computer support, automated inventory analysis, and an ADP study for the Division. The goal of the computer support work was to determine automation needs of Division personnel and help them solve computing problems. The goal of automated inventory analysis was to find a way to analyze installed software and usage on a Macintosh. Finally, the ADP functional systems study for the Division was designed to assess future HRMD needs concerning ADP organization and activities.

INTRODUCTION - The Human Resource Management Division of NASA's Langley Research Center has seen rapid growth in the use of automation in the past few years. This has been escalated by the growing use and interest in desktop computing. Division computing resources are already used at near capacity. The ADP Analysis Project provided immediate short term help with computing work and started a longer range examination of the ADP process. The overall objective of the project was to help the Division expand its computing capabilities and understanding.

PROJECT ACTIVITY - There were three major areas of work in the project: computer support, automated inventory analysis, and an ADP study for the Division. This project used resources from the Evaluation and Information Center (EIC), special project documentation and software resources available in the Division and from the research Fellow's personal library. In addition, the work was dependent upon the insights and perceptions of Division personnel into their particular job functions and organizational needs.

The goal of the computer support work was to determine needs of Division personnel and help them solve computing problems. This included assisting specialists in analyzing computer work, analyzing software and hardware problems and offering solutions, assisting in small group training for a new online capability and performing research on computing topics of interest to specialists and staff members. The topics explored and documented included reviews of available

Macintosh software and information concerning the possibilities for cross-platform transfer of a Pascal program, namely from the DOS environment to the Macintosh.

Automated inventory analysis was the second major part of the project. The goal of this work was to find a way to analyze what software is installed on a Macintosh computer and determine software usage. Research showed that the Norton Utilities for the Macintosh produced a report with the content needed to perform the analysis. A procedure was developed to allow a cooperative education student to extract the inventory for each Macintosh and save it in a postscript file. After this, a program was developed to extract the currently installed software, including system startup programs. In addition, the program passively analyzed software usage by looking at creation date and file type, which is explicit in the Macintosh environment. Of course, this only logged hard disk activity and therefore does not create a definitive log as an active process would. However, it did offer some clues as to actual use of the system and will help HRMD formulate questions as they make decisions concerning limited computer and software resources. The programs were developed in Turbo Pascal and produced a report in an average of 29.3 seconds per user on a 386 in the final run for the machines studied in the Division. Future work will involve the transfer of these programs to the Macintosh.

The ADP (Automated Data Processing) functional systems study for the Division involved developing information gathering tools and collecting data to assess the future needs concerning ADP organization and activities. Sixteen key Division personnel were selected to be included in the work, covering the areas of management, specialists and support personnel. Information was collected using an objective tool and a personal interview. The interview lasted just over an hour on average per participant. A report detailing and analyzing the collected data was developed for the Division. The report details skills, characteristics and some job functions that the Division sees as important in the ADP organization. It also presents short term and longer range issues that need to be addressed. Finally, some recommendations are presented concerning alternative approaches to reach ADP objectives.

APPLICATION TO HRMD - The intent of the computer support work was to help HRMD personnel become more adept in analyzing and solving computer related problems. In all cases, an attempt was made to transfer the knowledge to HRMD personnel to have an effect on the organization's total computing skill. The inventory analysis programs, procedures and reports have been set up so they can be available for use by the Division. Finally, the ADP study will be used by the Associate Chief and other management staff to make plans for the future of ADP in the Division.

CONCLUDING REMARKS - The Division continues to place a priority on proper application of computing skill to job related tasks. This work has enhanced current Division skills and provided planning which can be used by management to direct future activities.