Network Working Group
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Resource Evaluation

Abstract

In the spirit of RFC # 369, Evaluation of ARPANET resources, a new test group was organized at UCSB to take a detailed look at specific network resources and develop initial site dependent and function dependent MINIMAN's (Concise User Manuals). As the group was again composed of novices, initial effort revolved about basic procedural indoctrination. In the period between January and March 1973 a number of resources were investigated with varying degrees of success, as to availability, proper usage, sample problem solutions, and access to help and documentation. Included in this paper are a summary of the projects undertaken, initial suggestions at MINIMAN composition, and suggestions for future test groups. As these groups are attempting to perform a useful function for the ARPANET community, comments and suggestions are requested. Copies of the reports described herein are available on request from the Computer Systems Laboratory at UCSB.

Resources Investigated by the Group

I. APL

APL was investigated primarily at MULTICS. UCSD was also scheduled for evaluation but not carried out. APL at MULTICS was used to solve a few trivial problems. Most effort revolved about the difficult task of obtaining any available documentation. The octal codes for APL characters were obtained and mapped into the OLS keyboard. A side goal of the project, the comparison of APL with OLS, was begun but progressed very little.

II. Basic

Basic was investigated at a number of TENEX sites. Differences between sites were pointed out and necessary file manipulation commands were documented. An integration problem was written at one site, sent via FTP to another site, and then run again to show comparative execution times and compatability. Non-PDP/10 sites were investigated but no report was submitted.

III. TSO

IBM's Time Sharing option was exercised at UCLA-CCN. Interesting results were obtained regarding cost and execution time. Available commands were documented and a PL/1 program was written and executed.

IV. MIT-MATHLAB

This, the most successful of the projects, involved documentation of help, file manipulation, and MACSYMA access and an original research project in resource sharing. A recursive problem in pattern recognition and a triple integration were solved to demonstrate MACSYMA generated expressions into user programs on the OLS. More information on this project is forthcoming.

V. Local User Guide

A first pass network users manual was completed for UCSB users. In it are described console access and settings, character mappings, current servers, users and TIPs, and error conditions. Following minor revisions this guide will be distributed to local users.

VI. Local IMLAC Access to Network

Access to network graphics programs was attempted with a local IMLAC. Due to the non-uniformity of network IMLACs very little success was obtained. However, a program to access SRI-ARC's NLS was compiled and loaded from NIC and attempts were made to iron out the bugs. In addition a project was begun to maintain an IMLAC library and compiler locally for network usage. As in the other projects, basic operating procedures were documented.

VII. Harvard Graphics

Several attempts were made to learn of availability of graphics access to organic molecule synthesis programs but no response could be generated. This project was eventually abandoned.

MINIMAN Composition

As mentioned in a previous report, concise manuals are needed for network resources so that uniniated users may gain basic familiarity with foreign systems. In addition, manuals which describe specific network wide functions, such as Fortran compilors, are needed if resource sharing is to become a real trait of the ARPANET. For the resources evaluated, each group member submitted two reports

analagous to the two types of MINIMANS needed in the network. The headings and format of the reports will be included here to stimulate future discussion on MINIMAN composition.

REPORT # 1: Online Help for [a specific host computer]

I. Connection, Login, and Optimal TELNET Settings

II. Help Files

III. Job Status

IV. Time of Day

V. Time/Money Used/Left

VI. Interpersonal Communications

A. Console Linking

B. Location of Users

C. Mail Facilities

D. Access to Operator and/or Consultants

VII. Warnings or Unfriendly User Behavior

VIII. Useful References and Documentation

REPORT #2: How to Use [a specific resource]

I. Table of Contents

II. Access and Usage (or How to Start and Stop)

III. Editing Commands and File Structures

IV. Documentation, Location, and Cost

V. Sample Solutions and Significant Problems

VI. Appendices

A. Special Characters and Terminal Settings

B. Similarities and Differences from Site to Site

Future Test Groups

A number of projects are envisioned for future resource evaluators and include:

1. Complete evaluation of APL at MULTICS and UCSD with comparison to the On-Line System (OLS).

2. Investigate BASIC in depth, network wide.

3. Evaluate other symbolic manipulation programs such as REDUCE.

4. Summarize all games available in the network.

5. Find and evaluate specific application programs such as ZOG or the weather data base at CCA.

The projects undertaken will be determined in part by local interests. But a serious effort is being made for reports to accompany each evaluation.

Conclusion

Good results have been obtained from the two test groups thus far. Although composed of novices, as far as network familiarity is concerned, the groups have been able to produce data and reports which benefit the network community. The reports run the gambit from poor to excellent, but even the poorer ones have generated results by motivating more knowledgeable system personnel to find time to write the report in the "right" way. All data and reports compiled by these groups are available to interested network users. In addition, any information or documentation or manuals which might fit into the framework of the MINIMAN is requested from the network community. As this information begins to be collected, the network may truly start to become a resource sharing network.