

J H Saltzer

INTERDEPARTMENTAL

MASSACHUSETTS INSTITUTE OF TECHNOLOGY CAMBRIDGE, MASS. 02139

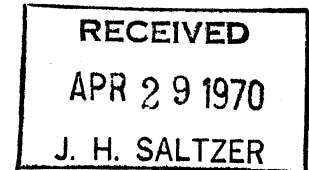
from the office of Information Processing Services

April 24, 1970

To: Multics Administrative Distribution

From: T H Van Vleck, J M Grochow

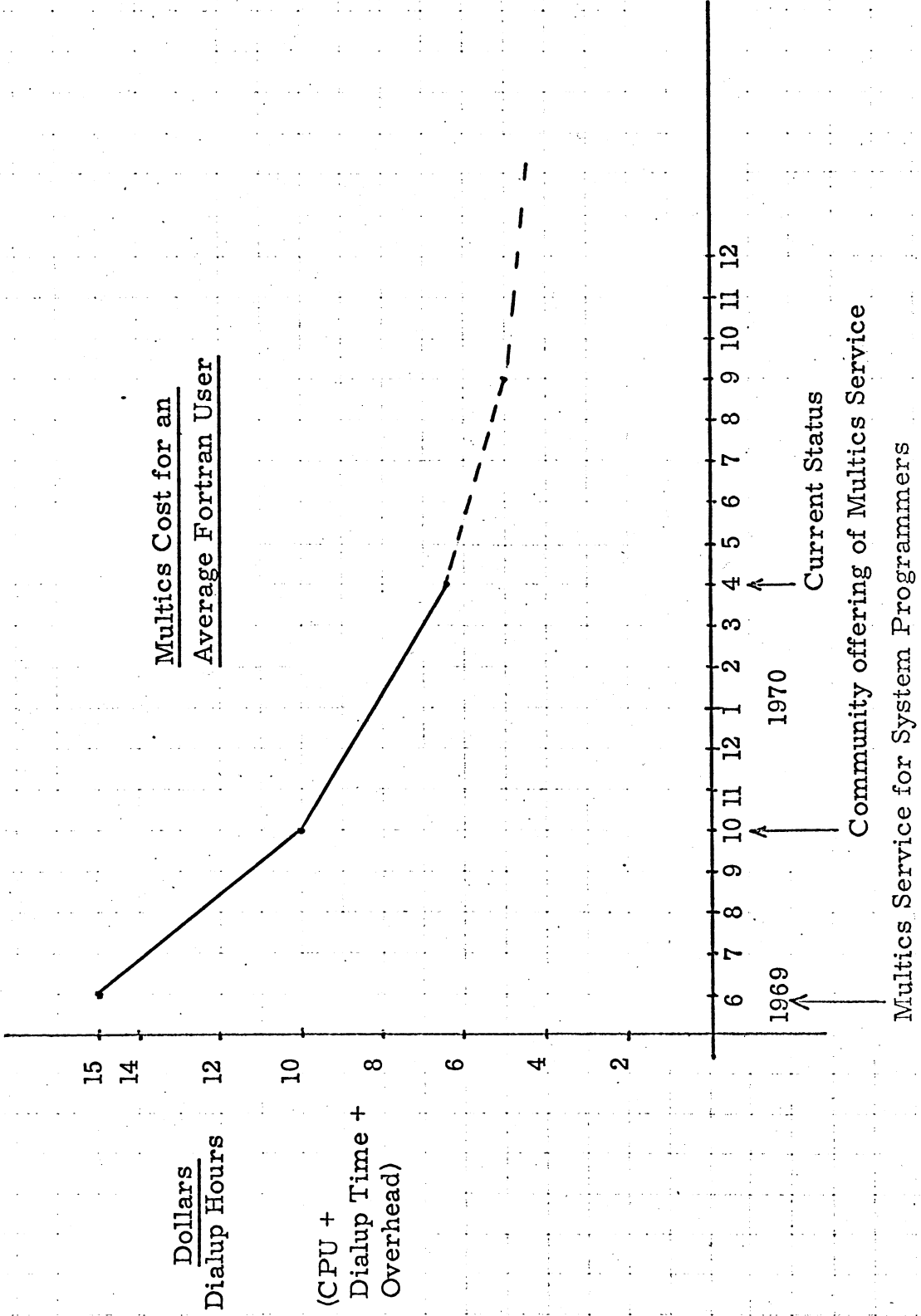
Subject: Presentation at GESHUA X



Our talk at GESHUA X Seattle on April fifteenth went very well. About 200 people heard us, and we received many compliments and expressions of interest afterwards.

The Vu-graph transparencies we used may be useful to some of you if you need to give a talk on Multics -- copies of them are attached. We are considering having fancy versions of some of these made up by Graphic Arts and would appreciate suggestions.

Attachments

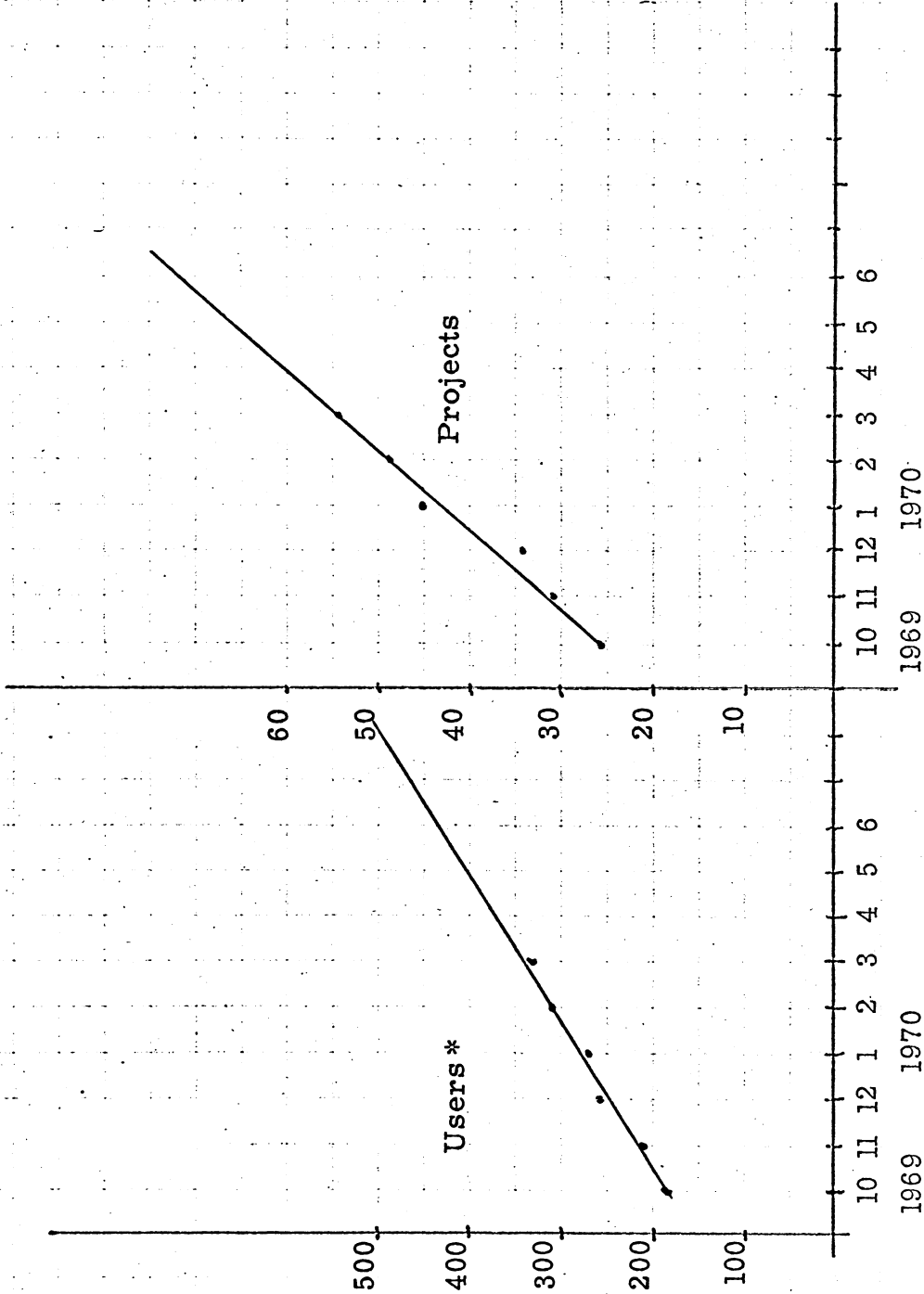


Administrative

Administrative

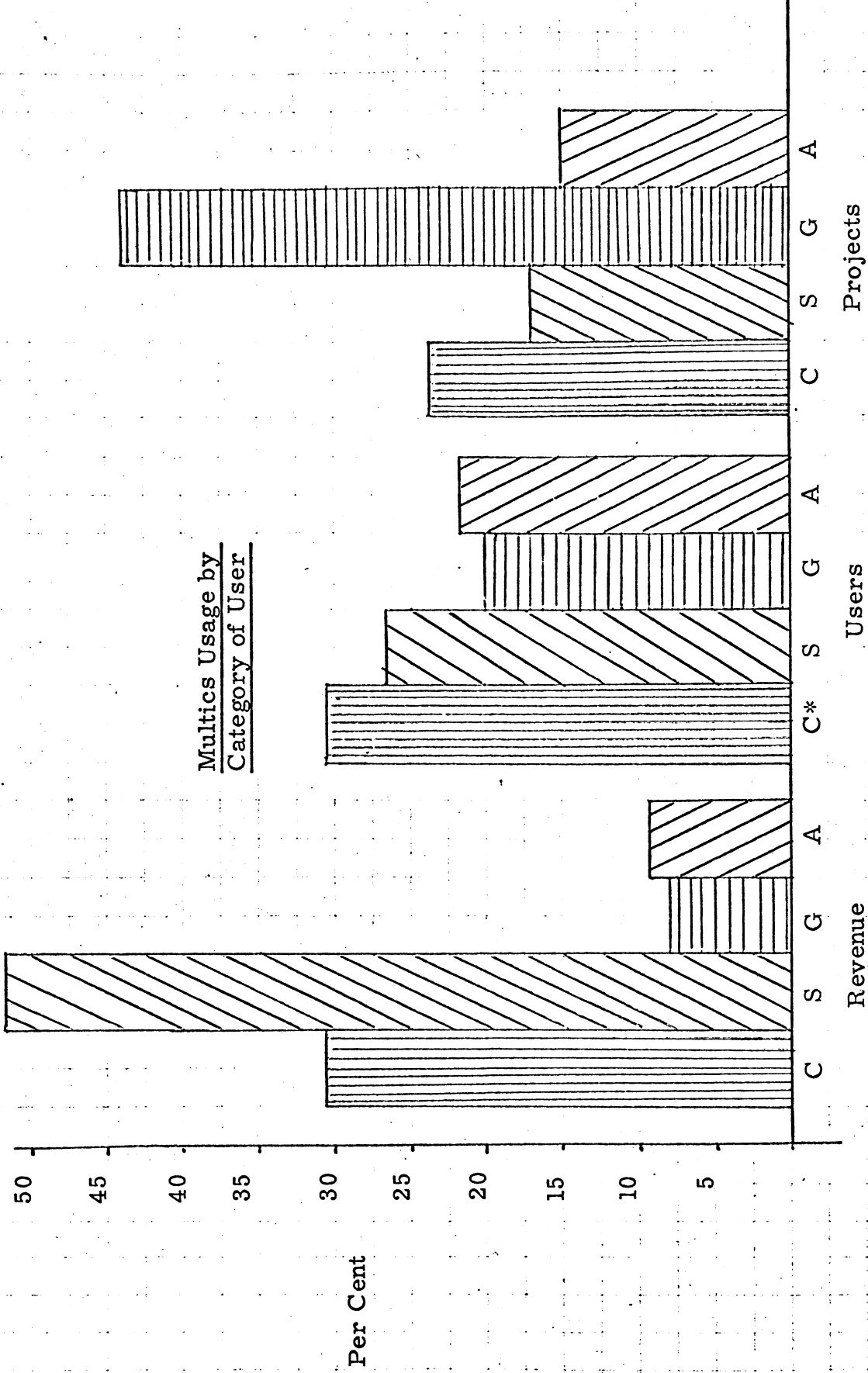
Multics Service for System Programmers

Community offering of Multics Service



Multics User Registration

* Does not include transient student users.

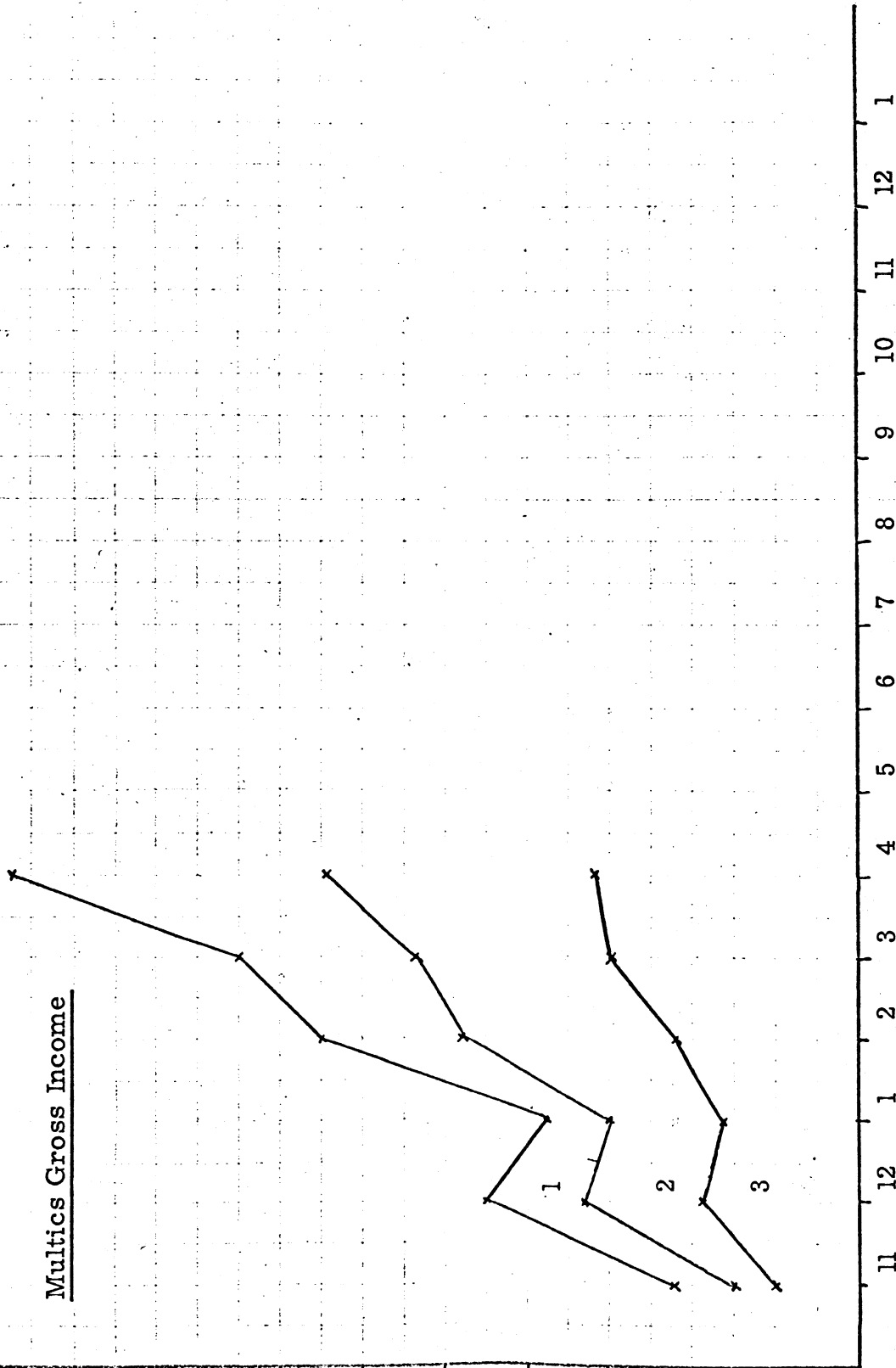


C = Class/Student S = Sub-System Designers

G = Other General Usage A = Administrative, Non-M.I.T., etc.

* Does not include transient student users.

Multics Gross Income

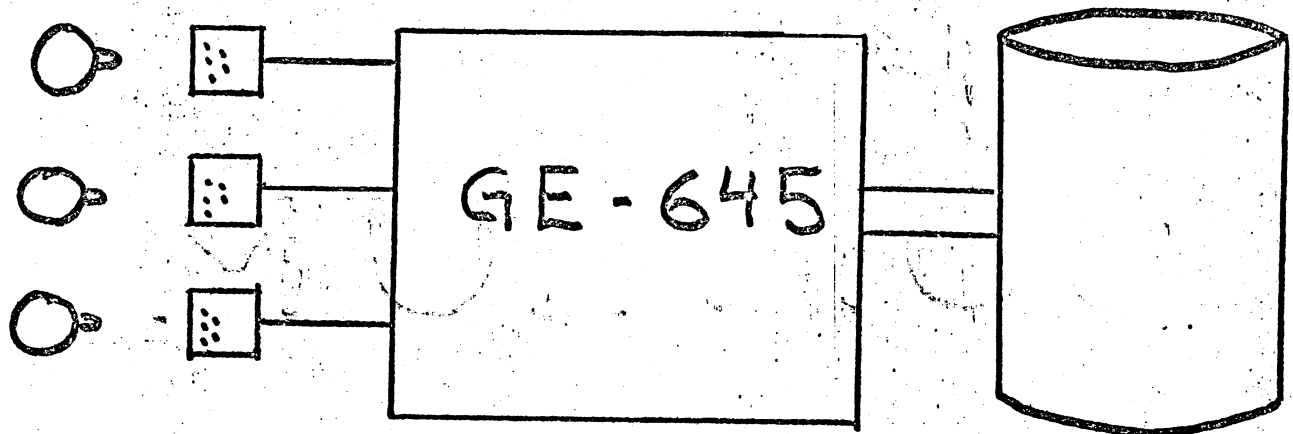


1969 1970 FISCAL '71 1971

1 = Customer use; 2 = System Services; 3 = System Development (See attached explanations)

MULTICS

MULTI
P L E X E D
I N F O R M A T I O N A N D
C O M P U T I N G
S E R V I C E



MULTICS

MIT, PROJECT MAC

BELL TELEPHONE LABORATORIES

GENERAL ELECTRIC CO.
CAMBRIDGE INFORMATION
SYSTEMS LABORATORY

DESIGN BEGUN IN 1964

MADE AVAILABLE TO MIT
COMMUNITY OCTOBER 1969

MIT INFORMATION PROCESSING
CENTER

MULTICS

1965 FALL JOINT COMPUTER
CONFERENCE - 6 PAPERS

GOALS OF SYSTEM

INITIAL DESIGN

MULTICS

GOALS

GENERAL-PURPOSE COMPUTER UTILITY

24-HOUR OPERATION

FLEXIBLE SUBSYSTEM ENVIRONMENT

EXPANDABLE CONFIGURATION

MULTICS

FEATURES

CONTROLLED SHARING OF
PROGRAMS + DATA

DIFFERENT USERS MAY HAVE
DIFFERENT PERMISSIONS ON
SAME FILE

MODES:

TRAP
READ
EXECUTE
WRITE
APPEND

MODES CHANGE DYNAMICALLY

MULTICS

FEATURES

VIRTUAL MEMORY

FILE SYSTEM AND ADDRESSING
SCHEME ARE SINGLE-LEVEL

TWO-DIMENSIONAL ADDRESSING
SEGMENT
OFFSET

SYMBOLIC REFERENCES

TREE-STRUCTURED FILE
HIERARCHY

FOUR BILLION WORDS OF
"CORE"

MULTICS

FEATURES

OPEN-ENDED SYSTEM

WRITTEN IN PL/I

HIGHLY MODULAR

DOCUMENTED

MAINTAINED ON-LINE

POWERFUL TOOLS

WELL INSTRUMENTED

MULTICS

FEATURES

STATE-OF-ART ENVIRONMENT

DYNAMIC LINKING

I/O STREAMS

ASCII

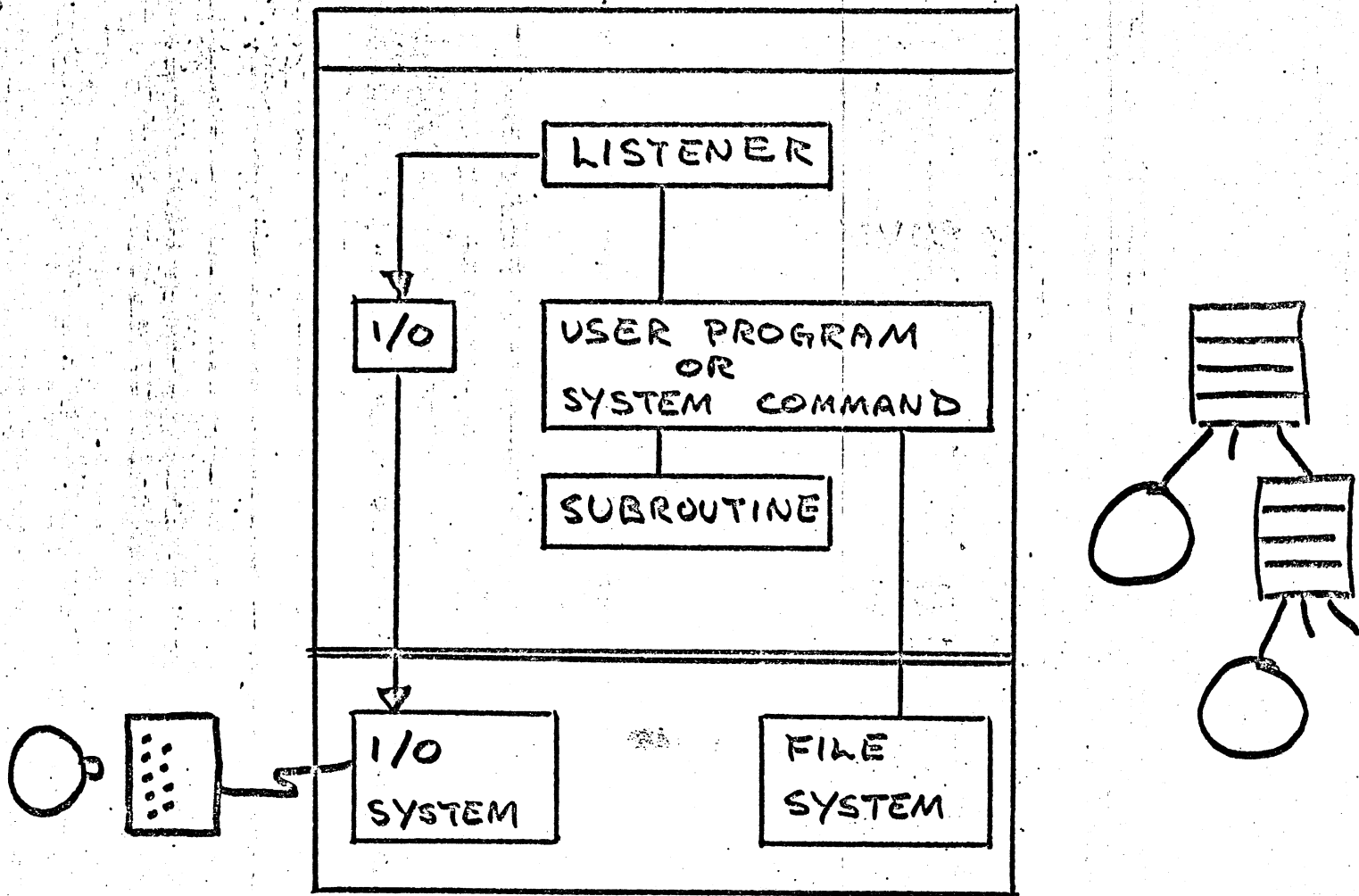
PL/I

PARALLEL PROCESSING

FLEXIBLE USER INTERFACE

MULTICS

EACH USER HAS A PROCESS.



MULTICS

LANGUAGES

PL/I
FORTRAN
BASIC
BCPL
EPLBSA
PAL
QED

APL
LISP
GASP

MULTICS

FUTURE

CONTINUE DEVELOPMENT

SYSTEM PERFORMANCE
OPERATIONAL SMOOTHNESS
LANGUAGES + SOFTWARE
CLEANER INTERFACES

NEW HARDWARE

MASS STORAGE
TERMINALS
THIRD GENERATION

USE BY MIT COMMUNITY

SHARING PROGRAMS + DATA
ADOPTING OTHER SOFTWARE

MULTICS

DOCUMENTATION

THE MULTICS PROGRAMMER'S MANUAL

USER'S GUIDE TO THE MULTICS
PL/I IMPLEMENTATION

USER'S GUIDE TO THE MULTICS
FORTRAN IMPLEMENTATION

THE MULTICS PL/I LANGUAGE
SPECIFICATION

A GUIDE TO MULTICS FOR
SUBSYSTEM PROGRAMMERS