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THE USL NASA PC R&D

DEVELOPMENT ENVIRONMENT STANDARDS

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July 31, 1984

The USL NASA PC R&D

DEVELOPMENT ENVIRONMENT STANDARDS

ABSTRACT

To facilitate the development of PC based projects, it is necessary to establish a set of operating standards. The intent of these procedures is to prevent unintentional interference between projects being concurrently developed on the PCs.

The standards address the following areas :

    Scheduling PC resources
    Login/Logout Procedures
    Training
    File Naming Conventions
    Hard Disk Organization
    Diskette Care
    Backup Procedures
    Copying Policy

Programming standards will be addressed in separate 'PC Programming Standards' documents.

TABLE OF CONTENTS

I. SCHEDULING PC RESOURCES

In order to assure a rational allocation of PC resources, a project proposal must be submitted to, evaluated by, and scheduled by the PC-R&D Team before any pc-based development work is initiated. The proposal should contain an estimate of PC time, PC storage, and system software required. The evaluation process will assign a priority to the project and schedule (or not schedule) it accordingly. A schedule sheet will be posted, containing the current PC time reservations. Any unreserved time slots can be used for training and experimentation.

II. LOGIN/LOGOUT

Once a project is scheduled , all development should be done while logged in under that project. The login/logout procedures are intended only to allow some measurement of PC resource utilization. Each scheduled project will be assigned a project name to be used for relevant development; work not pertinent to a scheduled project should be performed under the train project.

III. TRAINING

Training materials will be made available for all system software in terms of users manuals, commented working examples, online help, and, in some cases, online tutorials. As training material becomes available, notices will be distributed via Multics mail and through demonstration sessions. Questions may be placed in the PC Black Box; questions and answers will be posted.

IV. NAMING CONVENTIONS

PC DOS 2.1 allows eight character file names with three letter extensions. To allow consistent and efficient use of wild card file specifications, the following naming conventions should be adhered to:

1) The first eight characters positions should contain only the characters: {'a'..'z','A'..'Z','1'..'9','-'} and should comprise a meaningful name.

2) Extensions should indicate file type or format. The recommend extensions are:

```
HLP  -  Help files
SYS  -  System log files
PAS  -  PASCAL source files
BAS  -  BASIC source files (compressed and ascii)
C    -  C source files
RF   -  Files in the Multics runoff format
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WX   -   Files in the Wordix format
RO   -   Runoff output
WO   -   Wordix output
OBJ  -   Unlinked intermediate object code
EXE  -   Executable machine code
COM  -   Executable machine code (quick load format)
BAT  -   ASCII files containing DOS commands
ASM  -   Assembler source code
LIB  -   Library files (contain multiple OBJs)
DVC  -   Printer device drivers
```

V. HARD DISK ORGANIZATION

PC DOS 2.1 supports a hierarchical file system which is a valuable storage management feature. The following structure policy has been adopted:

1) The ROOT directory (\) will contain only other directory entries and system startup batch files.

2) Each registered user will have an individual directory under work not appropriate to project directories.&D for

3) The OMM directory will be used for uploading and downloading files. Once the accuracy of the file is established, it should be immediately copied out of the OMM directory to the appropriate area and deleted.

4) Because access to overlays, libraries, and error files is necessary for most compilers, all compilations should be done in the appropriate language files removed before users logoff.

5) For each project, an operational and a developmental directory will be established. Code will be migrated from the developmental to the operational directory only after it has met pre-defined debugging criteria (see C Programming Standards)

6)The \DOS directory contains system support files. No files should be added to this directory.

7) All major software systems will be located in dedicated directories to facilitate installation and backup. (e.g., \DBASE2, CMM, \WP\EDIX, etc.)

VI. DISKETTE CARE

Floppy diskettes, because they are exposed directly to environmental conditions, require a certain degree of care to mantain their integrity. The following guidelines should prevent any difficulties:

1) Keep diskettes in jackets until they are inserted into the disk drive.

2) If diskettes must be carried out of the lab, keep them in a rigid sealed container. Keep diskettes away from heat and moisture.

3) Never bend diskettes or touch the mylar surface. Should a diskette become contaminated, do not insert it into the

diskette drive. To do so would cause contamination of disk drive heads.

4) Never write on diskettes with a ballpoint pen; use felt tip markers only.

5) Always label diskettes, regarding contents and write protect critical diskettes by covering the write protect notch with a write protect tab.

VII. BACKUP PROCEDURES

Project directories will be backed up, via the backup command, by system personnel at 5pm on Fridays. Users will be responsible for backing up any significant changes in the interim. All backup diskettes should be clearly labeled, showing date of backup, directory path, contents, and sequence number, for multi-diskette backups.

VIII. COPYING POLICY

Purchased software may be copied, for backup purposes, exclusively by system personnel. Users may not, for any reason, copy software purchased for use on the PC/XTs. Illegal distribution of software jeopardizes not only the individuals involved, but the University and the project as a whole.

5.3

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15. Supplementary Notes

16. Abstract

The development environment standards which have been established in order to control usage of the IBM PC/XT development systems and to prevent interference between projects being concurrently developed on the PC's. The standards address the following areas: scheduling PC resources; login/logout procedures; training; file naming conventions; hard disk organization; diskette care; backup procedures; and copying policies.

This report represents one of the 72 attachment reports to the University of Southwestern Louisiana's Final Report on NASA Grant NGT-19-010-900. Accordingly, appropriate care should be taken in using this report out of the context of the full Final Report.

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