To:             Distribution

From:           Betsy Kerr

Date:           December 6, 1974

Subject:        Multics Change Requests


Enclosed are copies of Multics Change Requests which were
approved from November 15 - 30, 1974.

| | | STATUS | DATE |
|---|---|---|---|
| TITLE: Changes to bound_ftp_server_ | | | |
| AUTHOR: Kenneth T. Pogran | | Written | 11/14/74 |

| | | | |
|---|---|---|---|
| —ded in: [x] PL/I [ ] ALM [ ] other-explain in DETAILED PROPOSAL | Category (Check One) | Status | P 11/19/74 A 11/26/74 |
| | | Expires | 5/26/75 |
| -Planned for System MR  N A | Lib. Maint. Tools | DOCUMENTATION CHANGES | |
| -Fixes Bug Number(s)_____ | Sys. Anal. Tools | | |
| -Documented in MTB _____ | Sys. Prog. Tools | | |
| -User/Operations-visible | 355 | Document | Specify One or More |
| Interface change? [x] yes [ ] no | BOS | | |
| -Incompatible change? [ ] yes [xx] no | Salvager | MPM (Vol, Sect.) | |
| -Performance: [ ] Better [x] Same | Ring Zero | PLMS (AN #) 64 | |
| [ ] Worse | Ring One | | |
| -Replaces MCR _____ | SysDaemon/Admin. | MOSN (Sect.) | |
| | Runtime | MPAM (Sect.) | |
| | User Cmnd/Subr. | | |
| xx | File Transfer Ser. | MSAM (Sect.) | |

| Objections/Comments: | Info Segs | |
|---|---|---|
| For Design Discussb n | Other (Name) NUS | |
| | None (Reason) | |

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:  1.  Re-organize file_transfer_ to provide the File Access Protocol (described in NWG/RFC 520). Almost all the functionality required is already there; most of the work consists of subroutinizing existing code and selecting appropriate sequences of subroutine calls. Modify ftp_read_ascii_ and ftp_read_image_ to read a specified number of bytes, instead of always reading until the data socket is closed by the foreign host by adding entry points ftp_read_ascii_$read_with_count and ftp_read_image_$read_with_count.

2.  Add new module dev_file_transfer_ which implements specialized protocols for use in communication between the Development Machine and a service Multics system.

REASONS:  1.  There has been increased interest lately in implementing the File Access Protocol (FAP) within the File Transfer Protocol. Basically, FAP provides the capability for transferring a portion of a file, rather than an entire file.

2.  Effective use of the Network interface to the Development Machine can be enhanced through the use of special-purpose protocols which mesh nicely with the File Transfer Server environment. It is proposed that these special-purpose protocols be implemented in a separate module within bound_ftp_server_ so that they may be easily modified without interfering with the standard File Transfer Protocol implementation. Essentially, these specialized protocols would not be used anywhere but on the Development Machine.

IMPLICATIONS:
1.  Normal users of FTP will not be affected at all by the introduction of FAP; FAP will be available for those users who wish to use it.

2.  Normal users of FTP will not be affected at all by the addition of dev_file_transfer_; the special-purpose protocols will be available for use in communication with the development machine.

# Multics Change Request

| TITLE: | Addition of the NLST command to the File Transfer Server environment. | | STATUS | DATE | |
|---|---|---|---|---|---|
| AUTHOR: | Kenneth T. Pogran | | Written | 11/14/74 | |

| | | | | |
|---|---|---|---|---|
| -Coded in: ☒PL/I ☐AIM ☐other- explain in DETAILED PROPOSAL | Category (Check One) | | Status | P 11/19/74 A 11/24/7 | |
| -Planned for System MR _____ | Lib. Maint. Tools | | Expires | 5/26/75 | |
| -Fixes Bug Number(s) _____ | Sys. Anal. Tools | | DOCUMENTATION CHANGES | | |
| -Documented in MTB _____ | Sys. Prog. Tools | | | | |
| -User/Operations-visible | 355 | | Document | Specify One or More | |
| Interface change? ☒ yes ☐ no | BOS | | | | |
| -Incompatible change? ☐ yes ☒ no | Salvager | | MPM (Vol, Sect.) | | |
| -Performance: ☐ Better ☒ Same | Ring Zero | | PLMS (AN #) | 64 | |
| ☐ Worse | Ring One | | | | |
| -Replaces MCR _____ | SysDeemon/Admin. | | MOSN (Sect.) | | |
| | Runtime | | MPAM (Sect.) | | |
| | User Cmmd/Subr. | | | | |
| | x | FTP Server | MSAM (Sect.) | | |

| Objections/Comments: | Info Segs | |
|---|---|---|
| Postponed for Design Discussion | Other (Name) | NUS |
| | None (Reason) | |

Use these headings:  SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

**SUMMARY:**  Add the NLST command to the File Transfer Server environment (FTP commands are defined in the File Transfer Protocol document, NIC 17759, NWG/RFC 542). Modify ftp_command_processor_ to recognize and dispatch on the NLST command. Add entry point name_list to ftp_fs_commands_ to implement the NLST command. Add entry point list_transfer_ to file_transfer_ to implement the actual transfer of the name list over the FTP data connection (presumes approval of a companion MCR entitled "Changes to bound_ftp_server_" proposing subroutinization of file_transfer_).

**REASONS:**  The Multics File Transfer Server currently implements neither the LIST command nor the NLST ("name list") command for providing a directory listing over the FTP data connection, although the STAT command option for providing a directory listing over the FTP Telnet control connection is implemented.  There has been a growing need (among users of FTP) for at least one of the two, and NLST is the easier to implement, and meets the needs of users.

**IMPLICATIONS:**
None

Multics Change Request

TITLE:     Extend DPRINT to accept non-edited option

AUTHOR:    R. May/N. Morris

-Coded in: [X] PL/I [ ] ALM [ ] other-
 explain in DETAILED PROPOSAL
-Planned for System MR  2.0
-Fixes Bug Number(s)_____
-Documented in MTB_____
-User/Operations-visible
 Interface change? [XX] yes [ ] no
-Incompatible change? [ ] yes [X] no
-Performance:  [ ] Better [XX] Same
 [ ] Worse
-Replaces MCR    562

| STATUS | DATE |
|--------|------|
| Written | 11/18/74 |
| Status | A 11/26/74 |
| Expires | 5/26/75 |

**Category (Check One)**

| | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| | Ring Zero |
| | Ring One |
| | SysDaemon/Admin. |
| | Runtime |
| X | User Cmmd/Subr. |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|----------|---------------------|
| MPM (Vol, Sect.) | Commands |
| PLMS (AN #) | AN58 |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |

Objections/Comments:

| Info Segs | dprint, dprint_changes |
|-----------|------------------------|
| Other (Name) | |
| None (Reason) | |

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:     Currently, the printer software processes all listing input in the
             "edited" mode. This can allow erroneous data to exist in listing segments
             without detection. In addition, it is sometimes desirable to have the
             non-printable (and non forms/printer control) characters printed out in their
             octal representations.

IMPLEMENTATION:

The DPRINT command will be modified to accept the control argument "-non_edited"
or "-ned". The printer software has already been modified to provide the
capability of printing in non-edited mode. All characters which are not
ASCII graphics and not forms control characters (i.e., HT, BS, NL, CR,
VT, NP) will be escaped when printing in non-edited mode.

# Multics Change Request

TITLE: Fix bug in make_branches

AUTHOR: Paul A. Green

| STATUS | DATE |
|---|---|
| Written | 741115 |
| Status | A 11/26/74 |
| Expires | 5/26/75 |

-Coded in: [X] PL/I [ ] ALM [ ] other-
 explain in DETAILED PROPOSAL
-Planned for System MR    NA
-Fixes Bug Number(s)    NA
-Documented in MTB    NA
-User/Operations-visible
 Interface change? [ ] yes [X] no
-Incompatible change? [ ] yes [X] no
-Performance: [ ] Better [X] Same
 [ ] Worse
-Replaces MCR _____

| Category (Check One) | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| X | Ring Zero |
| | Ring One |
| | SysDaemon/Admin. |
| | Runtime |
| | User Cmmd/Subr. |

## DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | AN70 |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:
    Fix make_branches$delete to turn the safety switch off before
    trying to delete a branch.

REASONS:
    The program presently forces write access to the segment in order
to be sure it can delete it. With the advent of the safety switch, write
permission is no longer needed; instead the safety switch must be off.

IMPLICATIONS:
    Collection 3 segments will once again be able to be loaded "over"
segments already in the hierarchy, independent of the setting of the
safety switch.

DETAILED PROPOSAL:
    Coded and tested on CISL development machine.

| TITLE: Fix bug in msu_ | | STATUS | DATE |
|---|---|---|---|
| AUTHOR: Steve Herbst | | | |

| | | STATUS | DATE |
|---|---|---|---|
| | | Written | 11/15/74 |
| | | Status | A 11/26/74 |
| | | Expires | 5/26/75 |

-Coded in: [X] PL/I [ ] ALM [ ] other-
explain in DETAILED PROPOSAL
-Planned for System MR **NA**
-Fixes Bug Number(s) unreported
-Documented in MTB _____
-User/Operations-visible
Interface change? [ ] yes [XX] no
-Incompatible change? [ ] yes [XX] no
-Performance: [ ] Better [XX] Same
[ ] Worse
-Replaces MCR _____

| Category (Check One) | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| | Ring Zero |
| X | Ring One |
| | SysDaemon/**Admin.** |
| | Runtime |
| | User Cmmd/Subr. |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) No Interface Changes | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:     Fix msu_ to use effective extended access rather than that assigned
to group id to determine whether user can delete a message segment.

REASONS:     msu_ lists the acl for group id for its access check before deleting a message
segment.  If there is no explicit acl entry for group id, the user cannot
perform deletion though he may actually have d extended access.

# Multics Change Request

| | |
|---|---|
| TITLE: Bug fixes and a new feature in gcu command and associated subroutines | STATUS / DATE |
| AUTHOR: T. Casey | Written 11/20/74 |

-Coded in: [X] PL/I [ ] ALM [ ] other-
explain in DETAILED PROPOSAL

-Planned for System MR    NA

-Fixes Bug Number(s) _____

-Documented in MTB _____

-User/Operations-visible
Interface change? [X] yes [ ] no

-Incompatible change? [ ] yes [X] no

-Performance: [ ] Better [X] Same
[ ] Worse

-Replaces MCR _____

| Category (Check One) |
|---|
| Lib. Maint. Tools |
| Sys. Anal. Tools |
| Sys. Prog. Tools |
| 355 |
| BOS |
| Salvager |
| Ring Zero |
| Ring One |
| SysDaemon/Admin. |
| Runtime |
| X User Cmmd/Subr. |

Status A 11/26/74

Expires 5/26/75

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | III |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | gcu.info |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

**SUMMARY:** Change gcos_card_utility (gcu) command to:

1.   get around hardware bug in **cmpb** instruction;

2.   correct error in tape I/O programming caused by incorrect MPM documentation of nstd_;

3.   fix misc. unreported bugs;

4.   add ability to read and write GCOS Standard System Format files containing ASCII (instead of the usual BCD) characters.

Change decode_nstd_status_ and gcos_gsr_read_ to report tape I/O errors correctly.

**REASONS:** The bugs are interferring with work on GCOS simulator in Phoenix. The new feature provides a convenient way to transfer **ASCII files back and** forth between GCOS and Multics systems.

**IMPLICATIONS:**

Fewer bugs, correct reporting of tape I/O errors.

TITLE:    Fix bug in oc_data_init

AUTHOR:
     Bill Silver

| | STATUS | DATE |
|---|---|---|
| | Written | 11/20/74 |
| | Status | A 11/26/74 |
| | Expires | 5/26/75 |

-Coded in: ☒PL/I ☐AIM ☐other-
 explain in DETAILED PROPOSAL
-Planned for System MR **NA**
-Fixes Bug Number(s) unreported
-Documented in MTB _____
-User/Operations-visible
 Interface change? ☐ yes ☒ no
-Incompatible change? ☐ yes ☒ no
-Performance: ☐ Better ☒ Same
 ☐ Worse
-Replaces MCR _____

| Category (Check One) | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| x | Ring Zero |
| | Ring One |
| | SysDaemon/**Admin.** |
| | Runtime |
| | User Cmmd/Subr. |
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DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | no interface change |

Objections/Comments:

Use these headings:  SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:       Fix bug in oc_data_init.  If the system is initialized without a
     "prph opc" card then this bug will cause the system to crash.  The "prph opc"
     card is not a required configuration card.

# Multics Change Request

| TITLE: | Fix bug in convert_ipc_code_ | | STATUS | DATE |
|--------|------------------------------|---|--------|------|
| AUTHOR: | Bill Silver | | Written | 11/20/74 |

| | | |
|---|---|---|
| **Category (Check One)** | | |
| Lib. Maint. Tools | | |
| Sys. Anal. Tools | | |
| Sys. Prog. Tools | | |
| | 355 | |
| | POS | |
| | Salvager | |
| x | Ring Zero | |
| | Ring One | |
| | SysDaemon/Admin. | |
| | Runtime | |
| | User Cmmd/Subr. | |

-Coded in: [X] PL/I [ ] ALM [ ] other-
explain in DETAILED PROPOSAL
-Planned for System MR **NA**
-Fixes Bug Number(s) **unreported**
-Documented in MTB
-User/Operations-visible
  Interface change? [ ] yes [x] no
-Incompatible change? [ ] yes [x] no
-Performance: [ ] Better [XX] Same
  [ ] Worse
-Replaces MCR

| Status | A 11/26/74 |
|--------|-----------|
| Expires | 5/26/75 |

**DOCUMENTATION CHANGES**

| Document | Specify One or More |
|----------|---------------------|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | no interface change |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:     Fix bug in convert_ipc_code_. The main procedure name for this program
is incorrect. It is currently convert_ipc_code. The trailing underscore
must be added.

TITLE: Fix bugs in word_list

AUTHOR: Jerry Stern

- Coded in: [X] PL/I [ ] ALM [ ] other-
  explain in DETAILED PROPOSAL
- Planned for System MR **NA**
- Fixes Bug Number(s) _____
- Documented in MTB _____
- User/Operations-visible
  Interface change? [ ] yes [x] no
- Incompatible change? [ ] yes [x] no
- Performance: [ ] Better [x] Same
  [ ] Worse
- Replaces MCR _____

| STATUS | DATE |
|---|---|
| Written | 11/19/74 |
| Status | A 11/26/74 |
| Expires | 5/26/75 |

Category (Check One)

| | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| X | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| | Ring Zero |
| | Ring One |
| | SysDaemon/**Admin.** |
| | Runtime |
| | User Cmnd/Subr. |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | x (no change) |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY: Fix two bugs in the word_list/find_word commands.

Reasons: 1) When the input segment name argument to word_list contains
embedded blanks, the output segment name is not properly
constructed.

2) An error occurs when find_word attempts to print the left
delimiter for the first word in a segment.

Implications: None

TITLE: Incorporate library ACL commands in set_acl

AUTHOR: S. Herbst

| | STATUS | DATE |
|---|---|---|
| | Written | 11/21/74 |
| | Status | A 11/26/74 |
| | Expires | 5/26/75 |

-Coded in: [x] PL/I [ ] AIM [ ] other-
explain in DETAILED PROPOSAL

-Planned for System MR **NA**

-Fixes Bug Number(s) _____

-Documented in MTB _____

-User/Operations-visible
Interface change? [ ] yes [xx] no

-Incompatible change? [ ] yes [xx] no

-Performance: [ ] Better [xx] Same
[ ] Worse

-Replaces MCR 836

| Category (Check One) | |
|---|---|
| x | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| | Ring Zero |
| | Ring One |
| | SysDaemon/Admin. |
| | Runtime |
| | User Cmmd/Subr. |
| | |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | AN80 |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | no interface change |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY: Delete the modules lsetacl and llistacl (ldeleteacl). Add entry points lsetacl and ldeleteacl to set_acl. Do not add those names to set_acl but instead install an AIM transfer vector in tools that calls set_acl$lsetacl etc.

REASONS: All the ACL commands should work similarly, including the matching strategy for access names. The library ACL commands act the same as the regular ones except that they call installation_tools_ instead of hcs_. They should utilize common code in set_acl, though the command names should not be found in >sss.

Multics Change Request

TITLE:    Fix bug in archive

AUTHOR:   S. Herbst

| STATUS | DATE |
|---|---|
| Written | 11/21/74 |
| Status | A  11/26/74 |
| Expires | 5/26/75 |

-Coded in: [X] PL/I [ ] AIM [ ] other-
 explain in DETAILED PROPOSAL

-Planned for System MR __NA__

-Fixes Bug Number(s) __unreported__

-Documented in MTB _____

-User/Operations-visible
 Interface change? [X] yes [ ] no

-Incompatible change? [ ] yes [X] no

-Performance: [ ] Better [X] Same
  [ ] Worse

-Replaces MCR _____

Category (Check One)

| | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| | Ring Zero |
| | Ring One |
| | SysDaemon/Admin. |
| | Runtime |
| X | User Cmmd/Subr. |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | Vol. 1, Sec II |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |

Objections/Comments:

| |
|---|
| Info Segs |
| Other (Name) |
| None (Reason) |

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:    Fix archive to notice discrepancy between bit count and current length
       of a segment that is being appended, replaced or updated.  In this case,
       archive will not perform the operation and will print an error message.

REASONS:    Bit count can't always be trusted.

| | | STATUS | DATE |
|---|---|---|---|
| TITLE: Correct errors in debug. | | | |
| AUTHOR: Susan Barr | | Written | 11/21/74 |
| | | Status | A 11/26/74 |
| | | Expires | 5/26/75 |

-Coded in: [X] PL/I [ ] AIM [ ] other-
explain in DETAILED PROPOSAL
-Planned for System MR 2.0
-Fixes Bug Number(s) unreported
-Documented in MTB _____
-User/Operations-visible
 Interface change? [ ] yes [XX] no
-Incompatible change? [ ] yes [X] no
-Performance: [ ] Better [xx] Same
 [ ] Worse
-Replaces MCR _____

**Category (Check One)**

| | Category | |
|---|---|---|
| | Lib. Maint. Tools | |
| | Sys. Anal. Tools | |
| | Sys. Prog. Tools | |
| | 355 | |
| | BCS | |
| | Salvager | |
| | Ring Zero | |
| | Ring One | |
| | SysDaemon/Admin. | |
| | Runtime | |
| X | User Cmmd/Subr. | |

**DOCUMENTATION CHANGES**

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | none |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY: The installed version of debug incorrectly prints the word offset within the text of a break instruction. Change debug to permit users to specify locations in decimal as well as octal.

PROPOSAL: 1. Change the call to print the break instruction from

print_text_$format (which uses the pointer to the instruction to disassemble to get the text offset).

to print_text_$real_offset (which uses the text offset supplied by the caller.)

2. Change db_parse to accept syntax to move the working pointer using decimal as well as octal.

3. Correct global reset to reset all breaks.

TITLE: Fix odd length record problem reading tape

AUTHOR: Noel I. Morris

| STATUS | DATE |
|---|---|
| Written | 11/25/74 |
| Status | A 12/13/74 |
| Expires | 2/8/75 |

- Coded in: [x] PL/I [ ] ALM [ ] other-explain in DETAILED PROPOSAL
- Planned for System MR 2.0
- Fixes Bug Number(s) _____
- Documented in MTB _____
- User/Operations-visible Interface change? [ ] yes [x] no
- Incompatible change? [ ] yes [x] no
- Performance: [ ] Better [x] Same [ ] Worse
- Replaces MCR _____

| Category (Check One) | |
|---|---|
| Lib. Maint. Tools | |
| Sys. Anal. Tools | |
| Sys. Prog. Tools | |
| 355 | |
| BOS | |
| Salvager | |
| Ring Zero | |
| Ring One | |
| SysDaemon/Admin. | |
| Runtime | |
| User Cmmd/Subr. | |
| x | I/O |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:

When tape records are read through a PSIA, the reported record length as determined from the DCW tally residue will always be even. This is due to the fact that the PSIA is an 8-bit interface. This causes the length of odd-length records to be incorrectly returned to the caller of the nonstandard tape DIM. This problem occurs for both 9-track and 7-track tapes.

The PSIA does store additional status bits which enable the TDCM status analyzer to determine if a record is really odd-length. A simple fix to tdcm_status_ will correct this problem.

| TITLE: Fix bugs in attaching and detaching tapes | STATUS | DATE |
|---|---|---|
| AUTHOR: Noel I. Morris | Written | 11/26/74 |

-Coded in: xx PL/I ☐ ALM ☐ other-
explain in DETAILED PROPOSAL
-Planned for System MR 2.1
-Fixes Bug Number(s)_____
-Documented in MTB_____
-User/Operations-visible
  Interface change? xx yes ☐ no
-Incompatible change? ☐ yes x no
-Performance: ☐ Better x Same
  ☐ Worse
-Replaces MCR_____

| Status | A 12/3/74 |
|---|---|
| Expires | 6/3/75 |

| Category (Check One) | |
|---|---|
| | Lib. Maint. Tools |
| | Sys. Anal. Tools |
| | Sys. Prog. Tools |
| | 355 |
| | BOS |
| | Salvager |
| x | Ring Zero |
| | Ring One |
| | SysDaemon/Admin. |
| | Runtime |
| | User Cmmd/Subr. |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| XPLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:
  Note: Will not report errors on MTS 400 tapes.

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

## SUMMARY:

Several problems exist with the current tape attachment module:

1.  If a tape is explicitly mounted on a specified handler via a
    call to IOI (bypassing the attachment module), users will be
    unable to mount tapes on any handler with a device number
    greater than the device number of the handler explicitly
    attached.

2.  Unloading of tapes is done in the user ring by the tape DCM
    writearound. If the attachment module is called directly,
    no unload will be performed at either attach or detach time.
    In addition, no unload is performed if a force detach (e.g.
    at process destruction time) is performed.

3.  The error count printed at detach time by the tape attachment
    module is the count that is passed from the tape DCM writearound
    in the user ring. A user could supply any count.

Proposal:

1.  A simple fix to a loop in the attachment module will enable it
    to keep searching for a free tape after encountering a handler
    that it thought to be free, but that had been assigned through
    IOI.

2.  The tape attachment module will be modified to perform I/O
    when attaching and detaching a tape handler.

3.  The read and write error counts are stored in the tape MPC.
    These can be cleared at tape attachment time and read out
    at tape detachment time. They can be printed in the message
    to the operator at detachment time.

## Multics Change Request

| TITLE:  Modify nstd_ to accept density in tape name | STATUS | DATE |
|---|---|---|
| AUTHOR:  Noel I. Morris | Written | 11/25/74 |

| | Category (Check One) | Status | A  12/3/74 |
|---|---|---|---|
| -Coded in: [X] PL/I [ ] AIM [ ] other-<br>explain in DETAILED PROPOSAL | Lib. Maint. Tools | Expires | 6/3/75 |
| -Planned for System MR 2.0 | Sys. Anal. Tools | DOCUMENTATION CHANGES | |
| -Fixes Bug Number(s)_____ | Sys. Prog. Tools | | |
| -Documented in MTB _____ | 355 | Document | Specify One or More |
| -User/Operations-visible | BOS | | |
| Interface change? [x] yes [ ] no | Salvager | MPM (Vol, Sect.) | |
| -Incompatible change? [ ] yes [x] no | Ring Zero | PLMS (AN #) | |
| -Performance: [ ] Better [x] Same | Ring One | | |
| [ ] Worse | SysDaemon/Admin. | MOSN (Sect.) | |
| -Replaces MCR _____ | Runtime | MPAM (Sect.) | |
| | x User Cmmd/Subr. | | |
| | | MSAM (Sect.) | |

| Objections/Comments: | Info Segs   nstd_changes |
|---|---|
| | Other (Name) |
| | None (Reason) |

Use these headings:  SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:
The Multics standard tape DIM currently accepts either "=1600"
or "=800" in the name of the tape being mounted, and it uses that
string to set the initial density of the tape handler when mounting
the tape.  This change would allow the nonstandard tape DIM to use
the same convention.  nstd_ will be modified to allow any of the
following strings in the tape name: "=1600", "=800", "=556", "=200".
This change will enable nstd_ users to mount a tape of any known
density without making any changes to their software.

Implications:
None.  A default density of 800 bpi will continue to be used.

# Multics Change Request

| | |
|---|---|
| TITLE:   Delete the procedure move_device | STATUS    DATE |
| AUTHOR:   E. Stone | Written   11/26/74 |

-Coded in: ☒PL/I ☐ALM ☐other-
  explain in DETAILED PROPOSAL
-Planned for System MR _____
-Fixes Bug Number(s) _____
-Documented in MTB _____
-User/Operations-visible
  Interface change? ☐ yes ☒ no
-Incompatible change? ☒ yes ☐ no
-Performance: ☐ Better ☒ Same
  ☐ Worse
-Replaces MCR _____

| Category (Check One) | |
|---|---|
| Lib. Maint. Tools | |
| Sys. Anal. Tools | |
| Sys. Prog. Tools | |
| 355 | |
| BOS | |
| Salvager | |
| X | Ring Zero |
| Ring One | |
| SysDaemon/Admin. | |
| Runtime | |
| User Cmmd/Subr. | |

| Status | A   12/3/74 |
|---|---|
| Expires | 6/3/75 |

DOCUMENTATION CHANGES

| Document | Specify One or More |
|---|---|
| MPM (Vol, Sect.) | |
| PLMS (AN #) | |
| MOSN (Sect.) | |
| MPAM (Sect.) | |
| MSAM (Sect.) | |
| Info Segs | |
| Other (Name) | |
| None (Reason) | |

Objections/Comments:

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)

SUMMARY:     This procedure which implemented static multi-level transfers is
obsolete. The gate entry in hphcs_ which calls move_device should be
deleted also.