TO: Distribution
FROM: Betsy
DATE: February 7, 1975
SUBJECT: Multics Change Requests

Attached are copies of the Multics Change Requests which were approved from January 1 - 15, 1975.

Multics Project internal working documentation. Not to be reproduced distributed outside the Multics project.
**TITLE:** Add probe entry to operator pointed

**AUTHOR:** S. Barr

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<td>Fixes Bug Number(s)</td>
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- **User/Operations-visible**
  - BOS
  - Salvager
  - Ring Zero
  - Ring One
  - SysDemon/Admin.
  - MOSN (Sect.)
  - Runtime
  - User Cmmd/Subr.
  - MPAM (Sect.)
  - MSAM (Sect.)

**Objections/Comments:**

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

**SUMMARY:** The base of the stack contains a pointer to the operator pointed vector. An entry for probe$break should be added to this vector. This will allow users to call procedures containing probe breaks from command level.

**PROPOSAL:** Add a probe$break link to operator pointed. (There are two basic pointers in the table now).
**TITLE:** Move history registers to PDS and return them with rest of fault data when signalling

**AUTHOR:** S. Webber

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<th>Category (Check One)</th>
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<td>F/F</td>
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<td>Sys. Prog. Tools</td>
<td>Expires</td>
<td>7/7/75</td>
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**DOCUMENTATION CHANGES**

- Coded in PL/I
- Planned for System MR
- Fixes Bug Number(s) unreported
- Documented in MTB
- User/Operations-visible Interface change? Yes
- Performance: Same
- Replaces MCR

**SUMMARY:** Change the file to save the history registers in a wired region of the PDS and later copy them into the file frame and eventually the signaller frame if necessary.

**REASONS:** It is currently impossible to be guaranteed a consistent or meaningful copy of the history registers after a fault. This is because they are saved in a paged region of the PDS and hence may cause a page fault which will turn them back on before they can be consistently saved.

**IMPLICATIONS:** When tools are made available, users will have a powerful debugging aid at their disposal. Automatic instruction retry, if ever possible, is made a little easier.
**SUMMARY:**

No error status is reported when BOS reads from the card reader. This causes problems when the reader is flaky. In addition, the hopper empty/stacker full status is used to determine when the end of deck is reached. This can cause problems with a large deck or a flaky card reader.

**Proposal:**

1. Modify the BOS card reader DIM to print out all error conditions. All errors will cause the card reader to stop (e.g., dual read alert) will be reported but the reader will continue. Thus, in such cases the deck will have to be reloaded.

2. Modify the BOS card reader DIM to accept only the Multics standard EOF card (5-7 punch in column 1) as a valid end of deck condition. Until this card is detected, BOS will continue to read from the card reader.

**Implications:**

1. See comments above.

2. An MOSN must be issued to point out the necessity of using an EOF card in the BOS deck.
**SUMMARY:** Fix bug in mrdim.pl1. When a message segment is created mrdim $mrd attach says that "xxxx.message" was created when actually "xxxx.message" was. mrdim.pl1 will be changed to output the correct name.
### Multics Change Request

**Title:** Truncation of head/tail sheets

**THOR:** H. J. Goldberg

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**Status:**
- Written: 12/20/74
- Expires: 1/14/75
- Status: P

**Category:**
- Coded in [ ] PL/I [ ] AIM [ ] other
- Planned for System [ ]
- Fixes Bug Number(s) [ ]
- Documented in MIB [ ]
- User/Operations-visible [ ]
- User/Operations-invisible [ ]
- Interface change? [ ] yes [ ] no
- Performance: [ ] Better [ ] Same [ ] Worse
- Replaces MCR [ ]

**Objections/Comments:**

Needs further design discussion

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

**SUMMARY:** Need for allowing truncation of Head and Tail sheets on dprint requests.

**REASONS:** If Head and Tail sheets are printed on non-standard width devices they will cause unsightly, unreadable, and useless output due to wrapping of each line's end onto the next line by the dim. Forcing the dim to chop all lines, as opposed to just head and tail sheets, might cause loss of information in the actual listing.

**IMPLICATIONS:** Would aid in terminal-, network-, and spooling- bound output.

**DETAILED PROPOSAL:** Maintain an internal static output line length of default value, changeable by call to secondary entry points to head_sheet and tail_sheet.
TITLE: New control arguments for the dprint command

AUTHOR: Jerry Stern

Objections/Comments:

Don't forget _abs, etc. for 3.0.

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

SUMMARY: Add 4 new control arguments to the dprint command which govern the insertion of top and bottom page labels on each page of printed output.

Reasons: This feature is required by Air Force Data Services Center and is generally useful at all sites.

Detailed Proposal: The new control arguments are:

1) -top_label xxx
   -tlbl xxx
   specifies that xxx be used as the top page label.

2) -bottom_label xxx
   -blbl xxx
   specifies that xxx be used as the bottom page label.

3) -label xxx
   -lbl xxx
   specifies that xxx be used for both the top and the bottom page label.

4) -access_label
   -albl
   specifies that the access class of each segment be used as the top and bottom page label for that segment.

These new control arguments are incompatible with the no-endpage option.
TITLE: Fix bug causing BOS DUMP to run off end of tape when dumping to tape

AUTHOR: Noel I. Morris

STATUS: Written 12/20/74

DATE: 4

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

SUMMARY:

The BOS dump print package was never modified to reflect the change to tape firmware which causes EOT to be reported on every write following EOT reflector detection instead of just the first write.

Proposal:

Modify BOS to ignore multiple EOT status.
TITLE: fix bug in formline 

AUTHOR: Larry Johnson

-Coded in:
- Explained in
- Planned for System
- Documented in MTB
- User/Operations-visible
- Interface change?
- Incompatible change?
- Performance:
- Replaces MCR

Category (Check One)
Lib. Maint. Tools
Sys. Anal. Tools
Sys. Prog. Tools

355
POS
Salvager
Ring Zero
Ring One
Sys/Zmemon/Admin.
Runtime
X User Cmd/Subr.

Objections/Comments:

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

SUMMARY: No check is made by formline for negative repetition or field-width arguments
as in the ioa call

call ioa ("Av", -5);

REASONS: formline should be changed to treat all negative arguments as 0.
**Multics Change Request**

**TITLE:** fix bug in print_link_info

**AUTHOR:** L. Johnson

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<th>Category (Check One)</th>
<th>Code in</th>
<th>Planned for System MR</th>
<th>Fixes Bug Number(s)</th>
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**STATUS:** Status A
**DATE:** 1/27/74

**Document Specify One or More**

- Lib. Maint. Tools
- Sys. Anal. Tools
- Sys. Prog. Tools
- User/Operations-visible
- Incompatible change?
- Performance:
- Replaces MCR

**Objections/Comments:**

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

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

**SUMMARY:** Since print_link_info does not handle the star convention, it should treat star name arguments as errors. (Currently, it tries to treat the segments involved as old format bound object segments, usually with disastrous results.)

**DETAILED PROPOSAL:**

1) Use error_table_$nostars if star convention used.

2) change command to use iox instead of ios.
Multics Change Request

TITLE: fix bug in form_link_info

AUTHOR: L. Johnson

-Coded in: X PL/I ALM other-explain in DETAILED PROPOSAL
-Planned for System MR NA
-Fixes Bug Number(s) Sys. Prog. Tools
-Documented in MTR 355
-User/Operations-visible Yes
-Interface change? No
-Incompatible change? No
-Performance: X Better Same
-Replaces MCR

Category (Check One)  
Lib. Maint. Tools
Sys. Maint. Tools
Sys. Prog. Tools
Sys. Anal. Tools
DOCUMENTATION CHANGES
Document Specify One or More

Expires

Objections/Comments:

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

SUMMARY: form_link_info uses interpret_link to process each link. If an error code is returned from interpret_link, form_link_info places an error message in the output segment and proceeds on to the next link. If the error happens on the last link the error code is also returned to the caller of form_link_info, which is not correct.

DETAILED PROPOSAL:

1. make form_link_info not return an error for a bad link,
2. make the error message it inserts in the output segment more meaningful. Currently it says
   "link in objname"
   with no explanation that it is in error, or why,
3. use cleanup condition instead of establish_cleanup_proc

Reason

Use these headings: SUMMARY, REASONS, IMPLICATIONS, DETAILED PROPOSAL (Optional)
### Multics Change Request

**TITLE:** Convert cumulative_page_trace and page_trace to use iox.

**AUTHOR:** J. Gintell

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Objections/Comments:
- Info Segs
- Other (Name)
- None (Reason) no change

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

**SUMMARY:** Convert cumulative_page_trace and page_trace to use iox interfaces instead of iox.
**SUMMARY:**
Fix the do command to pick up all its args with cu$_arg_ptr$.

**REASONS:**
Currently do is a procedure declared with one parameter. Calling with no arguments sometimes causes a fault or other unorthodox behavior.
TITLE: Install user_ftp command

AUTHOR: D. Wells

SUMMARY: Install the command which implements the user side of the Network File Transfer Protocol. (This will also entail some changes to the installed user_telnet command.

REASONS: This command has been much used in a private library and is being submitted to the Network library.
**TITLE:** Add bound_ssa_commands to tools.

**AUTHOR:** Jerold C. Whitmore

- **Category (Check One):**
  - Lib. Maint. Tools
  - Sys. Anal. Tools
  - Sys. Prog. Tools
- **Status:** Written 1/3/75
- **Expires:** 7/7/75

**DOCUMENTATION CHANGES**

- **Document:**
  - Specify One or More
- **Specify One or More**
  - MPM (Vol. Sect.)
  - PLMS (AN #)
  - MOGN (Sect.)
  - MSAM (Sect.)
- **Info Segs**
  - Other (Name): SSA Manual
  - None (P-acon)

**Objections/Comments:**

- Have linkage fault handler print appropriate message.

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

**SUMMARY:**

Add the bound segment "bound_ssa_commands" to the tools library.

This segment contains the following commands:

```plaintext
reclassify_dir,
reclassify_seg,
```
Upate Server TELNET to new I/O System.

D. Wells

- Coded in PL/I [X] AIM [ ] other
- Planned for System MR
- Fixes Bug Number(s)
- Documented in MIB
- User/Operations-visible
- Performance: [X] Better [□] Same [□] Worse
- Replaces MCR

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

SUMMARY: Add additional entry points to interface iox I/O system, alter Answering Service portion of Server TELNET to utilize more of the same subroutines that the user process Server does, delete subroutines that only Answering Service TELNET previously used, fix some bugs in the canonicalization function of the Server TELNET.

REASONS: The Network is currently paying a high cost for each call made to read or write from or to the Network because of the number of indirections made by the iox writearounds to iox.

There is currently a maintenance and consistency problem with regard to the Answering Service portion of the SERVER TELNET because it uses a version which is no longer used in users' processes. A number of small changes were made with respect to terminal handling in the user process Server which have not been made to the Answering Service Server, e.g., in TTY33 compatibility mode, the AS continues to send out lowercase characters as backslash followed by the same lowercase characters rather than sending backslash followed by the corresponding uppercase character. (With the AS converted to share a number of routines with the user process, the routines previously used by only the AS will be deleted.)

There are a number of bugs in canonicalization in the Network interface; not only are these not the same bugs as are in the TTYDIM, at least one of them causes a fault while running in the user's process.

NOTES: The term Server TELNET as used here is synonymous with the programs ntw in the user process, and net_tty in the AS.

The reason for the long expiration date is that this will require a number of system changes and the installation of this routine might take a few compatibility steps. (It is currently impossible to attach any user I/O IOSIM/switch via an iox attach call; thus because we do not yet know the plans of the Command group for the switchover, we can't easily predict the steps necessary for actual conversion.)
### Multics Change Request

**Title:** Alterations to Answering Service portion of File Transfer Server

**Author:** D. Wells

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- **Status:** Written 12/31/74
- **Expires:** 3/31/75

**Document Specification:**

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**Objections/Comments:**

- None (Reason)
- Info Segs X
- Other (Name) NUS
- None (Reason)

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**SUMMARY:** Alter the Answering Service portion of the File Transfer Server to accept a number of commands which simply will be treated as NO-Ops; alter it to accept the form user.project to correspond to the Network restriction/convention with respect to spaces in FTP commands.

**REASONS:** The portion of the File Transfer Server in the AS (which serves as a transmogrifier between FTP syntax and that desired by the rest of the AS dialup system) currently does not accept a number of commands which it should, e.g., NOOP, BYTE 8. All of these types of commands may be treated as no-operations, i.e., they do not alter the state of the processing. Multics will not talk to a number of Network hosts in a File Transfer because these hosts assume that we should accept these commands.

The current version of the Server simply takes the rest of the line after a USER command and returns that to the dialup portion of the AS (with "login" prefixed). This causes problems because it is inconsistent with the FTP syntax which disallows extraneous spaces; thus we intend to make this portion of the Network software correspond to the other portions (which already accept the USER.PROJ convention).
## TITLE:
Improvements to Server TELNET (ntw_)

## THOR:
D. Wells

### Category (Check One)
- Lib. Maint. Tools
- Sys. Anal. Tools
- Sys. Prog. Tools

### Document (Specify One or More)
- MPM (Vol. Sect.)
- FLMS (AN #)
- MOSN (Sect.)
- MPAM (Sect.)
- MSAM (Sect.)

### Objections/Comments:
Info Segs
Other (Name): MUS
None (Reason)

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

### SUMMARY:
Pass machine conditions when signalling a quit received from the Network and enable page length processing for user coming in from the Network.

### Reasons:
The Network user_i/o IOSIM does not currently pass any received machine conditions when it signals the "quit" condition in a user's process. (It should be noted that a quit from the Network is denoted by the "Interrupt Process" character in the input stream.) This causes problems with the LISP subsystem which needs to look at these machine conditions when it is interrupted so that it can determine what was going on. (LISP allows variables to sometimes exist only in pointer registers, thus in order not to lose these variables, it needs to examine the machine conditions to determine where these variables are and to update them into addressable memory. This is done automatically with the TTYDIM because of its mechanism for detecting "quit"s in the hardcore supervisor.)

The Network software on Multics does not currently support page length processing (as supplied by the TTYDIM for ARDS). Because many users' TELNET programs do not supply this feature either, these users have no mechanism to stop the output display after every page so that they can examine it. The "pl" mode of the Network ntw_ IOSIM will be enabled and a bug which caused it to sometimes fail will be fixed.
**Multics Change Request**

**Title:** Implement have_mail active function  
**Author:** S. Herbst

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- Coded in: [ ] PL/I  [ ] AIM  [ ] other  
- Planned for System M1  
- Fixes Bug Number(s)  
- Documented in M1/M  
- User/Operations-visible  
- Interface change?  [ ] yes  [ ] no  
- Incompatible change?  [ ] yes  [ ] no  
- Performance:  [ ] Better  [ ] Same  [ ] Worse  
- Replaces MCR

**Objections/Comments:**

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

**SUMMARY:** Change the name of the is_mail active function (MCR 905) to have_mail. Allow have_mail to take a pathname argument telling it to look at a specific mailbox. Remove the active function code from mail and implement have_mail as a separate program.

**Name:** have_mail

This active function returns "true" if the user's mailbox contains mail, "false" otherwise.

**Usage:**

```
[have_mail -path-]
```

where path is the optional pathname of a mailbox. If path is not specified, have_mail does the following:

1. looks at the user's default ring 1 mailbox,
2. if this does not exist, looks at the user's default ring 4 mailbox,
3. if neither exists, returns "false".
# Multics Change Request

**TITLE:** Chase links in copy

**AUTHOR:** S. Herbst

**Coded in:** PL/I

**Status:** Written 1/2/75

**Expires:** 9/17/75

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**Category (Check One):**

- Lib Maint. Tools
- Sys. Maint. Tools
- Sys. Anal. Tools
- Sys. Prog. Tools
- Document
- Specify One or More

**DOCUMENTATION CHANGES**

- MPM (Vol, Sect.)
- PLMS (AN #)
- MFSN (Sect.)
- MPAM (Sect.)
- MSAM (Sect.)

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**User/Operations-visible Interface change?** Yes [x] No [ ]

**Performance:** Better [ ] Same [x] Worse [ ]

**Replaces MCR**

**Objections/Comments:**

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

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**SUMMARY:** Make copy seg and, therefore, the copy command always chase a target link.

**REASONS:** Currently "copy a b" fails when the target "b" is a link to a non-existent branch and "a" is a multi-segment file. It should create a copy of the msf.
**Title:** bug fixes to tty_write  

**Author:** M. Grady  

**Status:** Written 1/3/75  

**Expires:** 11/7/75  

**Documented in MTR:** none  

**Planned for System MR:** no  

**Fixes Bug Number(s):** unreported  

**Category:** Lib. Maint. Tools  

**Category:** Sys. Anal. Tools  

**Category:** Sys. Prog. Tools  

**Category:** Coded in: yes, PL/I  

**Category:** other-explain in DETAILED PROPOSAL  

**Category:** Planed for System MR  

**Category:** Expire  

**User/Operations-visible Interface change?** yes  

**Incompatible change?** no  

**Performance:** Better  

**Multiple time Replaces MCR**  

**Objections/Comments:** Info Segs  

**Other (Name):** None  

**Replacements MCR:** none  

**Document**  

**Specify One or More:** MFM (Vol, Sect.)  

**Salvager:** yes  

**Ring Zero:** yes  

**Ring One:** yes  

**Sysmon/Admin:** yes  

**Runtime:** yes  

**User Cmd/Subr.:** yes  

**PLMS (AN #):** yes  

**MOSN (Sect.):** yes  

**MPAM (Sect.):** yes  

**MSAM (Sect.):** yes  

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

**Summary:** 3 bugs exist in tty_write.  

1. delay chars are incorrectly inserted after multiple backspace chars,  

2. if in edited mode and one character is sent to tty_write and if this char is edited out, the shift state of the terminal is left in an undefined state; which messes up the next input,  

3. some of the characters which are \( \text{177}(8) \) are treated as form-feeds and not escaped as they should be.  

**Reasons:** These bugs should be fixed.  

**Implications:** None
TITLE: Provide truncate mode for printed output

AUTHOR: Noel I. Morris

- Coded in XPL/I
- Planned for System MR
- Fixes Bug Number(s): X 355
- Documented in MIB
- User/Operations-visible Interface change? Yes
- Performance: Worse
- Replaces MCR

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

SUMMARY:
Currently, most printed output device driver programs will "fold" those lines which are too long to be printed on the device. Some users may wish to have their output truncated at the end of a line rather than "folded" onto the next line. The truncated mode of output should be provided for the printer DIM, the TTY DIM, spooled output, microfiche output, remote output (Mohawk), and any other output DIMs which may be driven by the I/O Daemon.

Proposal:
The print conversion module, "prt_conv" will be modified to be able to operate in both "truncate" and "^truncate" mode. A flag bit will be provided for the purpose of conveying this mode setting to "prt_conv". All DIMs using prt_conv will be modified to accept this new mode setting. The TTY DIM and TTY code conversion will also be modified to accept and handle the new mode setting.
MULTICS CHANGE REQUEST

TITLE: fix bug in sort_seg

AUTHOR: Ross E. Klinger

Planned for System: not applicable
Fixes Bug Number(s): MPRF 7913
Documented in MTB: not applicable
Incompatible Change: no
User/Operations-visible Interface Change: no
Coded into: PL/I, ALM
Performance: better, same, worse

DOCUMENTATION CHANGES (specify one or more)
- MPM (vol, sect) MPAM (sect)
- MOSN (sect) MSAM (sect)
- PLMs (AN#)
- Info Segs
- Other

None (reason) user-transparent

OBJECTIONS/COMMENTS:

SUMMARY: truncate original segment if duplicate lines have been removed.

REASON: sort_seg resets the bit count, but does not truncate the segment to the new length. This is inconsistent and wasteful.

IMPLICATIONS: sort_seg will no longer be inconsistent and wasteful.

DETAILED PROPOSAL: add 1 line of code, a call to hcs$truncate_seg.
**Summary:** Modify page trace command to interpret the linkage fault information that has recently been added to the system trace.
### Changes to tty_ctl

**SUMMARY:** Several changes to tty_ctl.0cffecting the ASCII, model 33, and model 38 terminals.

**DETAILED PROPOSAL:**

1. Add control tables for the ASCII device, rather than sharing the model 37 tables. This is so that the ASCII device can ignore printer on and printer off sequences. Using the model 37 tables causes colons and semi-colons to be printed.

2. Recognize a null (a single newline) answer back as an ASCII device. This is so that when using a terminal with no answer back feature, a new-line character can be typed which will cause the 15 second answer back wait to be skipped.

3. Change the TTY33 and TTY38 control tables to ignore printer on and printer off, rather than escaping them.

4. Add 300 baud delay timings for TTY33 and TTY38 devices. This is done at the request of the NPS group so they can have better 300 baud terminal types. NPS does not recognize the ASCII device.
**TITILE:** Fix Zeroing of Branch Pad by Salvager

**AUTHOR:** A. Kobziar

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

**SUMMARY:** Fix the zeroing of the branch pad field in salv rebuild directory. The current code doesn't do the job. This must be installed before the Access Isolation Hardcore System.
Multics Change Request

MCR 975 Page 1 of 2

**TITLE:** Restructure the IO Daemon driver software

**AUTHOR:** Jerold C. Whitmore

**STATUS DATE:**

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**Objections/Comments:**

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

**SUMMARY:** Combine the initialization functions of io daemon driver, driver init, remote and iodd overseer into a new module iodd. This will make the operator interface and initialization algorithm for all drivers the same no matter what device is to be used.

Change io daemon parms as described in the MTB and design review to include several new keywords including the "Queue group" keyword. Require that the order of the keywords be structured for simplicity of parsing and for readability.

Provide driver modules for the printer, punch and G115 (Mohawk) devices which follow the entry point conventions described in the MTB.

Change the structure of the include files for the users requests in the message segments so that the header is common for all requests. The message type variable (formerly the print punch switch) will indicate which include file the driver should use to define the user's request. The header will be the only part of the request which may be understood by both the driver and the coordinator.

Provide a new command for the printer driver module to set the line length of head and tail sheets by truncation.

**Reasons:** We need the ability to add a new driver for a new device (tapes) in support of the access isolation mechanism. This restructuring will make the task easier for future drivers as well for the current requirement. The result will be the ability to add a new driver type by writing (or modifying) a driver module and specifying the new descriptive data for io daemon parms. Recompilation of standard system modules for the drive will be unnecessary.
Implications: This is a major change to the IO Daemon Driver software and the io_daemon_parms file which will be incompatible with previous versions. Installation will require a simultaneous installation of bound_iodd_, bound_iodc_, and io_daemon_parms. Previously queued requests in the message segments will be upward/downward compatible. The installation may be backed up with only the loss of the saved request list.
Multics Change Request

TITLE: Fix inconsistencies in ms commands

AUTHOR: S. Herbst

- Coded in: [X] PL/I  [ ] AIM  [ ] other.
- Planned for System MP
- Fixes Bug Number(s)
- Documented in MTR
- User/Operations-visible
- Interface change? [X] yes  [ ] no
- Incompatible change? [ ] yes  [X] no
- Performance:  [ ] Better  [X] Same  [ ] Worse
- Replaces MCR

Category (Check One)

L.b. Paint. Tools
Sys. Anal. Tools
Sys. Prog. Tools
DOCUMENTATION CHANGES

- Document
- Specify One or More

DATE

Written 1/10/75
Status
Expires 1/14/75

Objections/Comments:

None (Reason: doc is correct)

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

SUMMARY: Implement the star and equal conventions in ms add name, ms delete name and ms rename. Fix ms delete to handle multiple arguments correctly.

REASONS: Three commands do not implement the star and equal conventions that should and whose documentation says they do. Also, ms delete has a bug whereby it only processes the first argument.

NOTE: Likewise for the corresponding mailbox commands.