TO: Distribution

FROM: Gary C. Dixon

DATE: October 19, 1973

SUBJECT: enter_daemon_request

    Attached is an MCR proposal for three new Multics commands,
enter_daemon_request (edr), print_daemon_defaults (pdd), and
change_daemon_defaults (cdd). I would appreciate your comments
on the proposal. Send written comments to:

            Gary C. Dixon
            MIT Room 39-584

or mail comments to:

            GDixon.PDO

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SUMMARY:

1)   Install enter_daemon_request (edr), print_daemon_defaults
      (pdd), and change_daemon_defaults (cdd) into the Standard
      Service System.

2)   Retain the dprint and dpunch commands to maintain
      compatibility of the user interface (dprint is used in many
      exec_coms and programs), but redefine them as obsolete
      commands and eliminate all documentation for them (MPM
      writeups, info segments, pt segments).

REASONS:

1)   cdd allows the user to change the default heading line, the
      default destination, and (eventually) the default device
      class used by edr. dprint and dpunch use fixed default
      values. Allowing each user to set these defaults in his
      start_up.ec will make it simpler to direct all output to a
      remote distribution point or to a remote peripheral device.

2)   dprint and dpunch are two of the very few commands in the
      Standard Service System which attach some meaning to the
      position of their keyword control arguments. This is a bad
      inconsistency.

3)   edr accepts star names as input, rather than excluding them
      as do dprint and dpunch.

4)   edr provides a single command interface to the IO Daemon,
      rather than the six of dprint, dprint1, dprint2, dpunch,
      dpunch1, and dpunch2.

5)   edr provides an option (-force) which will force access for
      IO.Sysdaemon if it is not already present. This simplifies
      the printing of files by exec_coms and absentee jobs.

IMPLICATIONS:

1)   Compatibility of the current user interface to the
      peripheral I/O system is maintained by retaining
      dprint/dpunch.

2)   An easily expandible interface is provided for
      user-definition of default values.

3)   The inconsistency of positional keyword arguments is removed
      from the Standard Service System.

4)   No resource need be allocated to implement these commands,
      since I implemented them several months ago in my spare time
      to allow user-definition of default values.

5)   cancel_daemon_request (cdr) should be modified to accept
      star   names   as   input.   This will be feasible when
      match_star_name_ is accessible from all rings (a feature of
      the extended star convention).   Since cancel_abs_request
      (car) and cdr are two entries in the same program, this will
      mean that car will accept star names.

DETAILS OF THE PROPOSAL:

The MPM writeups for edr, pdd, and cdd are attached.   All three
are entry points of the same procedure, which currently resides
in >udd>pdo>gd>o>edr. You're welcome to try it out.

Names: enter_daemon_request, edr

     The enter_daemon_request command queues specified files
(segments or multi-segment files) for printing on a high-speed
printer, or for punching on a card punch. The printing or
punching of each file is controlled by a system process whose
process group id is IO.SysDaemon. This daemon process selects
files from one of three queues in first-in first-out order.
Files are selected first from the highest-priority queue
(queue 1) until this queue is empty, then from the next-highest
queue (queue 2), and finally from the lowest-priority queue
(queue 3). Each printed or punched file is preceded by a header
which includes the pathname of the file, the process group id of
the process which requested the printing or punching, the date
and time of printing or punching, and a heading line and
destination for the printed listing or punched card deck.

Usage

     enter_daemon_request arg1 ... argn ctl_arg1 ... ctl_argn

1) arg1   is a pathname which identifies one or more
                            files to be printed or punched. Relative
                            pathnames may be used, and the final entry
                            name of the path may be a star name. If a
                            link is identified, then the file linked to
                            will be printed or punched. If a directory
                            is identified by a star name, it will be
                            ignored.

2) ctl_arg1   may be any of the following control
                            arguments.

   -queue n
   -q n   n specifies the number of the queue to which
                            the request is to be submitted. It must be a
                            number between 1 and 3. The default queue is
                            3.

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|  enter_daemon_request        |        MULTICS PROGRAMMERS' MANUAL
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-header heading
-he heading   heading is the character string which is used
                       as the heading line in the header which
                       preceeds the printed listing or punched card
                       deck.   If this control argument is not
                       specified, then the default heading is used.
                       (See Notes below.)

-destination dest
-ds dest   dest is the character string which is used as
                       the destination in the header which preceeds
                       the printed listing or punched card deck. If
                       this control argument is not specified, then
                       the default destination is used. (See Notes
                       below.)

-delete
-dl   specifies that each file is to be deleted
                       after being printed or punched.

-copy n
-cp n   specifies that n copies of the file are to be
                       printed or punched.   n must be a number
                       between 1 and 4. The default is 1 copy.

-brief, -bf   specifies that the status of the queue to
                       which the request was submitted is not to be
                       printed.

-7punch, -7p   specifies that the file is to be punched in
                       7-punch mode.

-mcc   specifies that the file is to be punched in
                       machine character conversion mode.

-raw   specifies that the file is to be punched
                       without conversion.

-name name
-nm name   specifies that name identifies a single file
                       to be printed or punched, even though name
                       may appear to be a star name, or a control
                       argument.

-force, -fc   specifies that, if IO.SysDaemon does not have
                     read access on the file, enter_daemon_request
                     should try to give it read access without
                     informing the user. The default is to type a
                     message indicating that IO.SysDaemon does not
                     have access to the file, and asking if the
                     request should still be submitted to the
                     queue. If the user answers yes, then the
                     request is submitted to the queue. The user
                     should then give IO.SysDaemon read access to
                     the file.

Notes

Control arguments and file names may appear in the command
in any order. Each of the control arguments applies to all of
the file names given in the command.

If no -header or -destination control argument appears in
the command, then a default value is used in the header which
preceeds the printed listing or punched card deck. Normally, the
default heading line is the user's name, and the default
destination is the user's project. However, these default values
may be changed by the change_daemon_defaults command, and the
current default values may be printed by the
print_daemon_defaults command. Refer to the MPM writeups of
these two commands for more information.

One of the control arguments, -punch, -mcc, or -raw, must
be specified to request that the file be punched. Otherwise, it
will be printed. An error occurs if more than one of these three
control arguments appear in the same command.

Command
19/28/73

Names: print_daemon_defaults, pdd

This command prints the current values of the default
heading line and default destination. These values are used by
the enter_daemon_request command when no -header or -destination
control argument appears in an enter_daemon_request command.

Usage

    print_daemon_defaults

Notes

The values of the default heading line and default
destination can be changed by using the change_daemon_defaults
(cdd) command. Refer to the MPM writeup of this command for more
details. Refer to the MPM writeup of the enter_daemon_request
command to learn how to print or punch a file.

Command
09/28/73

Names: change_daemon_defaults, cdd

The enter_daemon_request command puts a heading line and a destination into the header which preceeds a printed listing or a punched card deck. When no -header or -destination control argument appears in the enter_daemon_request command, a default value is used. When enter_daemon_request is initiated in a process, the default heading line and destination are initialized to be the user's name and project, respectively. The change_daemon_defaults command sets new default values. The new values remain in effect until the process is terminated, or until the enter_daemon_request command is terminated, whichever comes first.

Usage

    change_daemon_defaults ctl_arg1 ... ctl_argn

1) ctl_argi   may be any of the following control
                       arguments.

    -header heading
    -he heading   heading is a character string which becomes
                       the new value of the default heading line.

    -destination dest
    -ds dest   dest is a character string which becomes the
                       new value of the default destination.

Note

    Refer to the MPM writeup of the enter_daemon_request command for learn how to print or punch a file. Refer to the MPM writeup of the print_daemon_defaults command to learn how to print the current values of the default heading and default destination.