Identification

System Operator Command to Delegate Responsibility
delegate
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Purpose

The System Operator delegates operator responsibility
to another operator by issuing the delegate command.
"Responsibility" may be one or more operator functions
(e.g., "media") or all those functions assigned to the
System Operator (in which case the System Operator is
relieved by another operator).

Usage

        delegate name (function_1 -function_2- ...)

where

        name   is that of the operator to whom
                    responsibility is being delegated;

        function_i is either "system" (new operator is
                    made responsible for all functions
                    assigned to present System Operator),
                    or the name of another function.

General Rules for Implementing System Operator Commands

Commands invoked in the System Operator's working process
for the performance of the system function communicate
with System Control. The System Operator's process-group
and System Control share several common data segments.

The segment "operator_comm" contains the structure

        dcl 1 op_comm based (p),

            2 sys_ctl_pid bit (36),   /*System Control
                                              process ID*/

            2 op_rep_chn bit (70),   /*Name of event
                                              channel for signalling
                                              operator presence*/

            2 op_req_chn bit (70);   /*Name of event
                                              channel for signalling
                                              a system function
                                              request*/

The segment "request_name" contains the structure:

```
dcl  1 op_req based (rp),

     2 req_name char (32),          /*Name of a request
                                       (command) belonging
                                       to the system function*/

     2 ref_chn bit (70);            /*Name of channel over
                                       which System Control
                                       signals completion of
                                       the request*/
```

These segments contain information needed by a System
Operator command to signal System Control and to receive
a reflection signal from System Control. Any further
information defining a particular request is placed in
a shared data segment whose name is the same as that of
the corresponding System Operator command; each such
data segment is a branch in the request directory of System
Control.

In general, all System Operator commands observe the following
set of rules in communicating with System Control.

1. Place the name of the request (command) in
   rp→op_reg.req_name.

2. Create an event channel over which System Control can
   reflect completion of the request. Place the name of
   the channel in rp→op_req.ref_chn.

3. Place any information needed to further define the
   request in the data segment for the command in the
   request directory of System Control.

4. Signal the request to System Control over the channel
   named in p→op_comm.op_req_chn. Check status; if
   signal not sent, inform the operator and go to step 7.

5. Call the Wait Coordinator to wait for the reflection
   signal from System Control.

6. On wakeup, check status of the request. If any
   irregularities have occurred in fulfilling the
   request, System Control will have indicated them in the
   data segment for the command in the request directory
   of System Control reserved storage. In the case of
   any irregularity, the operator is informed; it is left
   up to him to determine the seriousness of irregularities
   and to decide how to correct them.

7.   Delete the event channel created in step 2, and return.

Implementation of delegate

The procedure for the delegate command takes the steps
outlined above. The segment "delegate" in the System
Control request directory contains the structure:

```
dcl  1 deleg_args based (dp).

     2 op_name char (24),              /*operator to receive
                                         function(s)*/

     2 n_fcns fixed bin (17),         /*number of functions
                                         being delegated*/

     2 function (dp  deleg_args.n_fcns) char (32),
                                         /*name of function*/

     2 state fixed bin (17),          /*status returned by
                                         System Control*/

     2 info char (64);                /*descriptive info if
                                         error in delegation*/
```

Briefly, the procedure does the following:

1.   Place "delegate" in rp→op_req.req_name.

2.   Create an event channel and place its name in
     rp→op_req.ref_chn.

3.   Place the argument name in dp→deleg_args.op_name.

4.   Set dp→deleg_args.n_fcns, and, for each i, place
     the argument, function_i, in dp→deleg_args.function(i).

5.   Signal System Control over the channel named in
     p→op_comm.op_req_chn, and then call the Wait
     Coordinator.

6.   On wakeup, if dp→deleg_args.state = 0, go to step 7.
     Otherwise call write_out (BY.4.02) with the argument
     dp→deleg_args.info.

7.   Delete the event channel created in step 2 and return.