Setting up user interfaces

This document discusses some of the various ways of communicating with Supervisor and the TRIM system. By far the most effective mechanism is to use COMS windows because of its ease of use and the extra security features easily configurable with COMS Utility. The REMOTESPO mechanism is very dated now but it is useful to retain some capability for emergencies It is likely that Supervisor REMOTESPOs will eventually be de-implemented at some future date. The TTINTERFACE library interface, discussed later, is very flexible because of the excellent paging functionality of MARC and it is very likely that this product will be considerably enhanced in the near future.

It is important to provide user access to TRIM and Supervisor at an early stage because this is the easiest way to become familiar with the package. In particular, it is recommended that the COMS interface is available for the two Getting Started chapters as this is the most convenient to use.

SUPERVISOR and COMS windows

In earlier releases of Supervisor, the REMOTESPO mechanism was the preferred interface for a user to communicate with Supervisor. This has now been basically superseded by the COMS-window implementation, allowing users access from an MCS window.

Declaring an MCS window called SUPERVISOR requires the following small batch file:

```
CREATE WINDOW SUPERVISOR
   MAX_USERS                = 0
  ,MAX_DIALOGS              = 1
  ,MAX_TRANCODE_SIZE        = 0
  ,REMOTE_FILE              = N
  ,MCS                      = Y
  ,  TRUNCATED_RESULTS      = Y
  ,  TITLE                  = METALOGIC/SUPERVISOR
  ,NOTIFY_OPEN              = N
  ,NOTIFY_ON                = Y
  ,ON_TEXT                  = "TT EH"
```

Note that it is not necessary to set NOTIFY_OPEN to 'Y' since Supervisor will always automatically simulate a **TT WS** command when a new window session has been established. If NOTIFY_ON is set to 'Y', then "**TT EH"** is useful to see the last response that was generated the last time the user was on a Supervisor dialog for that station.

The above batch file may be compiled into the COMS CFILE using the LOAD command, or the SUPERVISOR window declaration can be interactively created from the Utility window. Once the window has been created, a Supervisor dialog can be readily established, if COMS and Supervisor security controls permit:

```
?ON SUPERVISOR
```

In the current release of Supervisor, both COMS windows and REMOTESPO mechanisms are supported up to a combined total of 16 stations. In a standard Supervisor installation, this is typically split into a maximum of 15 concurrent Windows sessions and 1 REMOTESPO, reflecting the non-preferred status of the REMOTESPO mechanism.

It is possible to configure the maximum number of Supervisor COMS Windows by using the configuration variable SUP_MAXWINDOWS. The value of SUP_MAXWINDOWS indicates now many concurrent Supervisor-COMS windows are permitted at any time; it may be assigned a maximum value of 16 and a minimum of 0. Note that its value will also assign the maximum number of permitted REMOTESPOs made available. SUP_MAXWINDOWS may be changed by the INSTALL utility:

```
U META/INSTALL SUP_MAXWINDOWS=12
```

In this case, setting SUP_MAXWINDOWS to 12 means that 4 REMOTESPO sessions will be available at any time. The default value for SUP_MAXWINDOWS is 15.

With reference to security, one of the advantages of using a COMS window interface is that it is possible to control access to SUPERVISOR windows using standard COMS features (e.g. the use of STATIONLISTs). However, Supervisor provides a second level of security which is applied after the station has passed COMS security validation. The effectiveness of these secondary security checks is controlled through the use of a second configuration variable called SUP_WINDOWSECURITY.

SUP_WINDOWSECURITY currently has two settings: MINIMUM and MAXIMUM; if the variable does not exist then the default is MAXIMUM. A value of MAXIMUM enforces any users attempting to open Supervisor COMS dialog to have a usercode which is PU or SYSTEMUSER. Note that SUPERUSER capable stations, logged-on under '*' will also be granted access. If SUP_WINDOWSECURITY is MINIMUM then Supervisor does not perform any security checking; all security is controlled entirely by standard COMS mechanisms.

The **TT USE** command reports the current setting of security level and can change it using the **TT USE WINDOWSECURITY <level>** command.

TT USE WINDOWSECURITY MAXIMUM

Changing the level of Window Security will not affect current Window sessions but will be used to validate any new log on attempts. If the log-on is rejected by SUPERVISOR, the following message will be briefly displayed at the originating COMS station:

SUPERVISOR: USERCODE does not have sufficient SECURITY clearance

The station will then be returned to the normal MARC dialog.

There are several commands available to terminate a Supervisor COMS dialog:

?CLOSE
BYE
QUIT

Please note that in the event of any problems with a Supervisor COMS window, issuing a ?CLOSE followed by a re-issue of ?ON SUPERVISOR (assuming this is your chosen window name) should clear any fault.

Previously, the COMS window implementation within Supervisor relied heavily on code originally designed to support the old REMOTESPO implementation. This code has now been rationalised to separate handling of windows stations from that of REMOTESPOs. Supervisor will invoke a separate task to support stations using each facility. The WINDOWS task will terminate when the last Supervisor-COMS dialog has been terminated; similarly, the REMOTESPO task will also terminate when the last REMOTESPO disappears.

```
AA MCS METALOGIC/SUPERVISOR

---Mix-Pri--CPU Time------------ 5 ACTIVE ENTRIES (ALL) MCS=METALOGIC/SUPERVISO
  7438  50      8:06 JOB *METALOGIC/SUPERVISOR/WAITWATCHER ON DISK
* 7872  85       :00 (SUPERVISOR) (SUPERVISOR)SUPERVISOR/REMOTESPO
* 7847  50       :00 (SUPERVISOR)SUPERVISOR/GRINDER
  7688  50       :01 (SUPERVISOR) (SUPERVISOR)SUPERVISOR/WINDOWS
  7427  84       :15 (TAPELIB) (SUPERVISOR)METALOGIC/SUPERVISOR/TAPELIBUPDATER
```

The **TT WINDOW** command has also been implemented to separate the control functions. This command is similar to **TT REMOTESPO** except that there is no **TT WINDOW +** facility. Numbers of in-use window and REMOTESPO sessions are reported in the responses to **TT WINDOW ?** and **TT REMOTESPO ?** commands. See the **Metalogic Supervisor Reference** manual for more details of this command.

MARC directive

Metalogic also supply an optional MARC Directive library allowing an alternative interface into TRIM and Supervisor. Directives are very advantageous because they allow access to the excellent response paging facilities that are built into the MARC software . Both **TT** and **TP** commands to Supervisor can be routed through the Directive library and normal responses are returned, but with the ability to scroll backwards and forwards through the output. Directives are defined by using a prefix which informs MARC to route text messages to links to the library so it is very convenient to use '**TT**' and '**TP**' as these prefixes.

For example, a typical response to the **TP SCR** command is shown below. Not the '+' character in the Action field allowing the response to be scrolled.

```
          OUTPUT - MARC COMMAND OUTPUT                        11:11:12
 Action:<+                                                             >
_         HOme GO REturn COmnd STore + -                  (Press SPCFY for Help)   _

Response returned at 11:11:08

 ----- FIND: PGOK (1250)  ---------------- Location ----- Created ------ Expire
 SHIP45:META4040108/FILE000              SCRATCH POOL 15:17 16/06/1995 14/09/19
 SHIP46:META4040108/FILE000              SCRATCH POOL 14:14 20/06/1995 18/09/19
 000036:DBSPACK95283A/FILE000            SCRATCH POOL 23:11 10/10/1995 31/10/19
 ----- FIND: PGOK (1600)  ---------------- Location ----- Created ------ Expire
 BLLOG7:CMIGTAPE/FILE000                 SCRATCH POOL 00:00 20/09/1993 19/12/19
 BOB055:META91303B/FILE000               SCRATCH POOL 00:00 30/10/1991 28/01/19
 BOB064:TESTPACK/FILE001                 SCRATCH POOL 00:00 27/01/1993 27/04/19
 BRISTB:METAOECD/FILE000                 SCRATCH POOL 00:00 09/02/1985 10/05/19
 IFN471:RMVTAPE/FILE000                  SCRATCH POOL 12:02 14/06/1995 12/09/19
 KEYS1 :KEYSTAPE/FILE000                 SCRATCH POOL 00:00 02/10/1989 31/12/19
 MDUMP :MEMDUMPA12/FILE000               SCRATCH POOL 00:00 25/09/1990 24/12/19
 METAL :BADENTERSCHED/FILE000            SCRATCH POOL 00:00 22/11/1993 20/02/19
 METARN:METATAPELIB                  1:1 SCRATCH POOL 09:19 24/10/1994 21/11/19
 META31:METAPRIVLIB/FILE000              SCRATCH POOL 00:00 18/02/1984 18/05/19
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
TP SCR
```

The INSTALL utility will automatically load the MARC Directive library from the Metalogic release tape during installation of either full Supervisor or TRIM. The library codefile is called:

METALOGIC/SUPERVISOR/TTINTERFACE

A 'TP' or 'TT' directive can be enabled by entering the command:

```
DIRECTIVE TP = METALOGIC/SUPERVISOR/TTINTERFACE
DIRECTIVE TT = METALOGIC/SUPERVISOR/TTINTERFACE
```

Using the above command would permit access to Supervisor and TRIM commands to all logged-on users, so some security constraints should be considered here. The DIRECTIVE command has modifiers which restrict such access and are signified by the presence of a ":" following the filename:

```
DIRECTIVE TP = METALOGIC/SUPERVISOR/TTINTERFACE: CONTROL
```

The current list of security modifiers are SYSTEM, PRIVILEGED, CONTROL and COMMAND. The above example would restrict the TP command to only those users with COMS CONTROL capabilities. Please refer to the Unisys MARC Operations Guide for a more detailed description of this facility.

Metalogic are intending considerable development of this interface in the near future, enhancing both security and command handling capabilities.