Miscellaneous UniFLEX™ Documents

Technical Systems Consultants, Inc.

Using a Modem with UniFLEX™

Version 1.02 of UniFLEX will support the connection of an 'answer mode' modem to any one of the standard terminal ports. All of the necessary handshaking is implemented as follows.

A. RTS (Request To Send) - Pin 8 (output). This output may also be called DTR (Data Terminal Ready) and is used to inform the modem it is OK to answer the line. UniFLEX will make this output high only in multi-user mode, and only if the system is attempting to run the login program for this terminal. The modem should not answer the line if this line is low.

B. CTS (Clear To Send) - Pin 20 (input). This input should be driven low by the modem until the line has been answered and the carrier has been established. UniFLEX will not output any data through the port until this line is brought to a high level by the modem.

C. DCD (Data Carrier Detect) - Pin 12 (input). This input should be driven high by the modem whenever a successful connection has been made. If the carrier is ever lost, the modem should take this line to a low level. The transition from high to low (carrier to no carrier) will cause an interrupt within UniFLEX. This hardware interrupt will be converted into the program interrupt 'HANGI' by UniFLEX and sent to all tasks associated with this terminal.

The HANGI interrupt will normally cause a task to terminate. It will always cause a user to be logged off. Several UniFLEX programs have been changed to 'catch' this interrupt and perform special actions. Those which do not catch the interrupt will be terminated in a manner similar to that caused by a control C type interrupt. The modified programs are as follows:

A. 'edit'. The editor will perform all of the actions of the 'stop' command upon receiving the HANGI interrupt. This will insure no loss of data.

B. 'basic'. BASIC will do one of two things upon receipt of HANGI. If there is no program source in the buffer (i.e. doing a 'list' will not display any program lines), BASIC will simply terminate. If there is program source in the buffer, it will be written out to a file named 'basic.hangup' in the current directory. This action is identical to typing the command: save "basic.hangup". Any previous 'basic.hangup' file will be overwritten without notice. Once the file has been saved, BASIC is terminated.

The above programs will keep you from losing data as a result of loss of carrier while accessing UniFLEX through a modem.

Notes

technical systems consultants, inc.

111 Providence Road • Chapel Hill, North Carolina 27514 • (919) 493-1451 • TWX 510-920-0540

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PRODUCT BULLETIN
Removing Enhanced and Standard Printer Spoolers

The following procedure may be used to completely remove the standard printer spooler (supplied as part of UniFLEX) and the Enhanced Printer Spooler (a separate package) from a UniFLEX system disk. It is simply a series of "kill" commands to delete all spooler-related files. If you only have one of the spoolers on your system disk, or do not have some of the files to be killed on your system disk, simply ignore any "Can't kill" messages you may receive during the process. To perform this procedure, you should be the system manager and should probably be in single-user mode.

Enter the following commands:

```
chd /etc
kill insp prcon print printer$ splcmd spool
chd /usr/bin
kill end idle next pstop purge rerun
kill abort break forms go pause pskip
kill requeue rgo setpr splstat
```

Next you should kill all of the individual spooler commands which actually spool a file. These are the commands in "/usr/bin" (or possibly "/bin") which were linked to "/etc/print" for the standard spooler or linked to "/etc/spool" for the enhanced spooler. Examples are "spr", "spr2", "ppr", and "nec". You may also have created spoolers by other names and all of these should be killed.

Depending on your reason for removing the spoolers, you may also wish to kill the spooler directories. These are located in "/usr/spooler" and have the same names as the spooler commands mentioned above. Note that you will have to kill all the files within these directories in order to kill the directories themselves.

This completes removal of the spooler programs. You may wish to also kill all spooler-related help files from the directory "/gen/help".

NOTE: See next page for re-inserting spoolers

Re-inserting Enhanced Printer Spooler on System Disk

The "insert" routine for the Enhanced Printer Spooler assumes a couple of standard spooler files are left on the system disk. In order for "insert" to function properly after removing the spooler with the above procedure, you should first enter the commands:

```
create /etc/print
create /etc/prcon
```

and then proceed with the "insert" procedure as normal. This puts the enhanced spooler onto your system disk in the same form it was supplied on the master Enhanced Printer Spooler disk. You must now perform the usual steps to create individual spoolers and directories as documented in the Enhanced Printer Spooler manual.

Re-inserting Standard Spooler on System Disk

To re-insert the standard spooler onto your system disk, you must have the master UniFLEX diskette available. Boot the system disk onto which you wish to insert the standard spooler and mount the master UniFLEX diskette onto the "/usr2" directory. Now enter the following commands to rebuild the spooler:

```
chd /usr2/etc
copy insp print prcon /etc
chd /etc
owner system insp print prcon
perms u+rwx o-rwx insp prcon
perms u+rwx o-rw o+x print
chd /usr2/usr/bin
copy purge /usr/bin
chd /usr/bin
owner bin purge
perms u+rwx o+x o-rw purge
link /etc/prcon end
link /etc/prcon idle
link /etc/prcon next
link /etc/prcon pstop
link /etc/prcon rerun
```

This puts the standard spooler onto your system disk in the same form it was supplied on the master UniFLEX disk. You must now perform the usual steps to create individual spoolers and directories as documented in the UniFLEX manuals.