

Network Lab X.25 Test Configuration

Abstract

Four Telematics ACP 50 switches are connected as two MMOC-CO switch pairs. The MMOC Network Telephone Numbers (NTN's) are 4044207517 and 4044207518. The corresponding CO NTN's are 7709515165 and 7709515166.

Both MMOC units are connected to a Cisco 7505 router [alabc0iii]. The CO units are connected to separate Cisco 3640 routers via:

- 1) a T1 link ([athngac0] 7709515165)
- 2) a combination T1/E1 link ([guam01] 7709515166).

The X.25 traffic is created using connect/disconnect and data display requests generated by several small computers. Four MS-DOS computers run custom scripts for the Mirror communications program. The fifth control computer is a Radio Shack Model 100 which runs a custom BASIC program. Three of the computers are configured for auto-restart of their programs in the event of a power failure. The other two computers require manual input during a restart. In the event of a communications failure with the local or remote Telematics unit, some of the computers provide periodic audible alerts.

The databases in the Telematics units are similar, differing primarily in the local and remote NTN information. The Telematics units usually perform a proper restart after power fail, but short hits on the power may require a manual restart.

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Restart Procedures

ACP 50

The Telematics ACP 50 can be restarted by removing the front panel and pressing the Reset switch on the left side of the main board. If the front panel is not accessible, the unit can be reset by removing and restoring power.

PC

The Compaq requires that the F1 key be pressed to boot from the floppy disk after a reboot or power failure.

The Radio Shack Model 100 requires the following procedure after a power failure:

1. Operate power switch on right side to OFF, then ON.
2. Use the arrow keys to select **TC1.BA** on the menu then press ENTER.
3. When the program information screen appears, press ENTER.

The Safari and Toshiba PC's automatically restart after reboot or power failure.

Certain network failures can leave the ACP 50 with an active sym (System Manager) session which will prevent further local or remote sym access from the controller PC's. This condition must be cleared by resetting the ACP 50.

Telematics configurations

How to

The ACP 50 is configured by the sym (System Manager) command. The password for all ACP 50's in this test is **pass**. Sym access is available locally on any async port (usually ports 25 - 28) or remotely with an NTN*`sym call. One ACP 50 [7709515166] is minimally configured and has no personality module. Local access to the sym function on this unit is via the **vcall** command (no password required) on the default control port (top right port as viewed from the rear).

The ACP 50 files that contain information specific to the lab network configuration are:

nodeconf: information about the node, including nodeID and software version
x25conf: NTN, packet size, netname
netmap: NTN/name to node translation
netroute: node to service (netname) translation
port: port type (async, x25, etc), speed, other parameters

Changes are made permanent by the **save** command. The ACP 50 must be restarted for certain changes to take effect. This can be done from a sym session with the **hub.restart** command.

7709515165

```
1001 sym> fi x25conf
record initialized to default values
1001 sym> li 1
```

```
file x25conf contains the following records:
record #1
factory parameters
 0. netname = net1
static parameters
 1. app = dte      2. autostart= enable  3. dlnumber = 1
 4. lic = 1       5. loc = 1       6. lpc = 1
 7. ltc = 20      8. nic = 0       9. noc = 0
10. npc = 19     11. ntc = 236
dynamic parameters
12. acktimer = 0  13. ackthresh= 0  14. nuireq = no
15. cugformat= basic 16. dbmod = no  17. defpsze = 256
18. defwsze = 2    19. deftpout = 9600  20. diagsupr = no
21. direction= twoway 22. flowneg = yes  23. fstacc = no
24. updncomd = 0   25. maxpsze = 256  26. maxwsze = 2
27. netaddr = 7709515165 28. nettype = upss  29. netvrslon= 1984
30. pktbuf = 0    31. stndbytim= 30  32. revacc = yes
33. thruneg = yes 34. tx0 = 180    35. tx1 = 200
36. tx2 = 180    37. tx3 = 180    38. xtend = no
1001 sym> fi nodeconf
record initialized to default values
1001 sym> li *
```

```
file nodeconf contains the following records:
record #1
factory parameters
 0. partnum = 5#2848-STD-F-000804      1. dbversion= 0800
 2. ident = <Null>  3. swdate = 980426a  4. swversion= 0410
static parameters
 5. calarms = 10  6. swtype = inf  7. portscan = normal
 8. unittype = BN1503  9. x25call = 255  10. x25mltpnt= no
11. enets = 0  12. elinks = 0
dynamic parameters
13. acctrec = 0  14. alarmrec = 10  15. itibusy = 0
16. rate1 = 0  17. rate2 = 0  18. rate3 = 0
19. rate4 = 0  20. nodeid = 1001  21. exstat = x25
22. rsttimer = 0  23. chgreqid = 0 0
1001 sym> fi port
record initialized to default values
1001 sym> li *
```

```
file port contains the following records:
record #1
factory parameters
 0. portname = P25  1. service = iti
dynamic parameters
 2. acctng = none  3. baud = 9600
 4. billnum = 000000000000  5. class = terminal
 6. debounce = 100  7. dmarxnum = 8  8. enable = yes
 9. fclevel = 64  10. maxbpace= 960  11. minbpace= 480
12. mode = 8N1  13. type = none  14. porteia = 3wire
15. segsize = 0  16. timer1 = 10  17. timer2 = 0
18. dialcmd = 0  19. dialout = disabl  20. idnum = 0
record #2
factory parameters
 0. portname = P26  1. service = iti
dynamic parameters
 2. acctng = none  3. baud = 9600
 4. billnum = 000000000000  5. class = terminal
 6. debounce = 100  7. dmarxnum = 8  8. enable = yes
 9. fclevel = 64  10. maxbpace= 960  11. minbpace= 480
```

```

12. mode = 8N1      13. type = none      14. portea = 3wire
15. segsize = 0     16. timer1 = 10      17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl 20. idnum = 0

```

record #3

factory parameters

```
0. portname = P27      1. service = iti
```

dynamic parameters

```

2. acctng = none      3. baud = 9600
4. billnum = 000000000000      5. class = terminal
6. debounce = 100    7. dmaxnum = 8      8. enable = yes
9. fclvl = 64        10. maxbpace= 960    11. minbpace= 480
12. mode = 8N1      13. type = none      14. portea = 3wire
15. segsize = 0     16. timer1 = 10      17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl 20. idnum = 0

```

record #16

factory parameters

```
0. portname = L5      1. service = link
```

dynamic parameters

```

2. acctng = none      3. baud = 2048K      4. billnum = 7709515165
5. class = <Null>     6. debounce = 100    7. dmaxnum = 8
8. enable = yes      9. fclvl = 0        10. maxbpace= 11000
11. minbpace= 1851   12. mode = exsync   13. type = none
14. portea = x21bis  15. segsize = 0     16. timer1 = 10
17. timer2 = 0       18. dialcmd = 0     19. dialout = disabl
20. idnum = 0

```

1001 sym> fi netmap

record initialized to default values

1001 sym> li *

file netmap contains the following records:

record #1

dynamic parameters

```
0. netaddr = 0*      1. userdata = *      2. nodeid = 1
```

record #2

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = ``sym 2. nodeid = 2
```

record #3

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = ``trace 2. nodeid = 3
```

record #4

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = ``nms 2. nodeid = 5
```

record #5

dynamic parameters

```
0. netaddr = *      1. userdata = *      2. nodeid = 32700
```

record #6

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = *      2. nodeid = 1001
```

record #7

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = ``hp 2. nodeid = 1
```

record #8

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = muxnms 2. nodeid = 1
```

record #9

dynamic parameters

```
0. netaddr = 7709515165 1. userdata = 116 2. nodeid = 116
```

record #22

dynamic parameters

```
0. netaddr = 4044207517 1. userdata = ``sym 2. nodeid = 1000
```

record #23

dynamic parameters

```
0. netaddr = 4044207517 1. userdata = ``trace 2. nodeid = 1000
```

record #24

dynamic parameters

```
0. netaddr = 4044207517 1. userdata = ``nms 2. nodeid = 1000
```

record #25

dynamic parameters

0. netaddr = 4044207517 1. userdata = * 2. nodeid = 1000

record #28

dynamic parameters

0. netaddr = 4044207517 1. userdata = * 2. nodeid = 1000

1001 sym> fi netroute

record initialized to default values

1001 sym> li *

file netroute contains the following records:

record #1

dynamic parameters

0. nodeid = 1 1. service = iti 2. prio = 100

record #2

dynamic parameters

0. nodeid = 2 1. service = sym 2. prio = 100

record #3

dynamic parameters

0. nodeid = 3 1. service = trace 2. prio = 100

record #4

dynamic parameters

0. nodeid = 5 1. service = nms 2. prio = 100

record #16

dynamic parameters

0. nodeid = 1000 1. service = net1 2. prio = 100

1001 sym> fi vhsconf

record initialized to default values

1001 sym> li *

file vhsconf contains the following records:

record #1

factory parameters

0. portname = L1

static parameters

1. maxfsze = 256 2. burstlen = 1100 3. userbufs = 0

dynamic parameters

4. eiatype = X21bis 5. acctng = none 6. baud = 2048K

7. mode = exsync 8. billnum = 000000000000

9. debounce = 100 10. enable = yes 11. segsize = 0

record #2

factory parameters

0. portname = L2

static parameters

1. maxfsze = 128 2. burstlen = 1100 3. userbufs = 0

dynamic parameters

4. eiatype = X21bis 5. acctng = none 6. baud = 64K

7. mode = exsync 8. billnum = 000000000000

9. debounce = 100 10. enable = yes 11. segsize = 0

1001 sym>

7709515166

1001 sym> fi x25conf
record initialized to default values

1001 sym> li 1

file x25conf contains the following records:
record #1
factory parameters
0. netname = net1
static parameters
1. app = dte 2. autostart= enable 3. dlnumber = 1
4. lic = 1 5. loc = 1 6. lpc = 1
7. ltc = 20 8. nic = 0 9. noc = 0
10. npc = 19 11. ntc = 236
dynamic parameters
12. acktimer= 0 13. ackthresh= 0 14. nuireq = no
15. cugformat= basic 16. dbmod = no 17. defpsze = 256
18. defwsze = 2 19. deftpout = 9600 20. diagsupr = no
21. direction= twoway 22. flowneg = yes 23. fstacc = no
24. updncomd = 0 25. maxpsze = 256 26. maxwsze = 2
27. netaddr = 7709515166 28. nettype = upss 29. netvrision= 1984
30. pktbuf = 0 31. stndbytim= 30 32. revacc = yes
33. thru neg = yes 34. tx0 = 180 35. tx1 = 200
36. tx2 = 180 37. tx3 = 180 38. xtend = no

1001 sym> fi port
record initialized to default values

1001 sym> li *

file port contains the following records:
record #1
factory parameters
0. portname = L28 1. service = link
dynamic parameters
2. acctng = none 3. baud = 9600
4. billnum = 000000000000 5. class = <Null>
6. debounce = 100 7. dmarxnum = 8 8. enable = yes
9. fcleve = 0 10. maxbspace= 11000 11. minbpace= 1851
12. mode = exsync 13. type = pstn 14. porteia = x21bis
15. segsize = 0 16. timer1 = 10 17. timer2 = 0
18. dialcmd = 0 19. dialout = disabl 20. idnum = 0
record #2
factory parameters
0. portname = L27 1. service = link
dynamic parameters
2. acctng = none 3. baud = 9600
4. billnum = 000000000000 5. class = <Null>
6. debounce = 100 7. dmarxnum = 8 8. enable = yes
9. fcleve = 0 10. maxbpace= 11000 11. minbpace= 1851
12. mode = exsync 13. type = pstn 14. porteia = x21bis
15. segsize = 0 16. timer1 = 10 17. timer2 = 0
18. dialcmd = 0 19. dialout = disabl 20. idnum = 0
record #3
factory parameters
0. portname = L26 1. service = link
dynamic parameters
2. acctng = none 3. baud = 9600
4. billnum = 000000000000 5. class = <Null>
6. debounce = 100 7. dmarxnum = 8 8. enable = yes
9. fcleve = 0 10. maxbpace= 11000 11. minbpace= 1851
12. mode = exsync 13. type = pstn 14. porteia = x21bis
15. segsize = 0 16. timer1 = 10 17. timer2 = 0
18. dialcmd = 0 19. dialout = disabl 20. idnum = 0
record #4
factory parameters
0. portname = L25 1. service = link


```

dynamic parameters
 2. acctng = none      3. baud   = 9600
 4. billnum = 000000000000      5. class = <Null>
 6. debounce = 100      7. dmarxnum = 8      8. enable = yes
 9. fclvl = 0      10. maxbpace= 11000      11. minbpace= 1851
12. mode = exsync      13. type = pstn      14. porteia = x21bis
15. segsize = 0      16. timer1 = 10      17. timer2 = 0
18. dialcmd = 0      19. dialout = disabl      20. idnum = 0

record #24
factory parameters
 0. portname = L5      1. service = link
dynamic parameters
 2. acctng = none      3. baud   = 2048K      4. billnum = 7709615166
 5. class = <Null>      6. debounce = 100      7. dmarxnum = 8
 8. enable = yes      9. fclvl = 0      10. maxbpace= 11000
11. minbpace= 1851      12. mode = exsync      13. type = none
14. porteia = x21bis      15. segsize = 0      16. timer1 = 10
17. timer2 = 0      18. dialcmd = 0      19. dialout = disabl
20. idnum = 0

1001 sym> fi netmap
record initialized to default values

1001 sym> li *

file netmap contains the following records:
record #1
dynamic parameters
 0. netaddr = 0*      1. userdata = *      2. nodeid = 1
record #2
dynamic parameters
 0. netaddr = 7709515166      1. userdata = ``sym      2. nodeid = 2
record #3
dynamic parameters
 0. netaddr = 7709515166      1. userdata = ``trace      2. nodeid = 3
record #4
dynamic parameters
 0. netaddr = 7709515166      1. userdata = ``nms      2. nodeid = 5
record #5
dynamic parameters
 0. netaddr = 4044207518      1. userdata = *      2. nodeid = 1000
record #6
dynamic parameters
 0. netaddr = 7709515166      1. userdata = *      2. nodeid = 1001
record #7
dynamic parameters
 0. netaddr = 7709515166      1. userdata = ``hp      2. nodeid = 1
record #8
dynamic parameters
 0. netaddr = 7709515166      1. userdata = muxnms      2. nodeid = 1
unused record

record #22
dynamic parameters
 0. netaddr = 4044207517      1. userdata = ``sym      2. nodeid = 1000
record #23
dynamic parameters
 0. netaddr = 4044207517      1. userdata = ``trace      2. nodeid = 1000
record #24
dynamic parameters
 0. netaddr = 4044207517      1. userdata = ``nms      2. nodeid = 1000
record #25
dynamic parameters
 0. netaddr = 4044207517      1. userdata = *      2. nodeid = 1000
unused record
record #28
dynamic parameters
 0. netaddr = 4044207517      1. userdata = *      2. nodeid = 1000

```

```
1001 sym> fi netroute
record initialized to default values
```

```
1001 sym> li *
```

```
file netroute contains the following records:
record #1
dynamic parameters
 0. nodeid = 1      1. service = iti    2. prio  = 100
record #2
dynamic parameters
 0. nodeid = 2      1. service = sym     2. prio  = 100
record #3
dynamic parameters
 0. nodeid = 3      1. service = trace   2. prio  = 100
record #4
dynamic parameters
 0. nodeid = 5      1. service = nms     2. prio  = 100
unused record

record #16
dynamic parameters
 0. nodeid = 1000   1. service = net1    2. prio  = 100
```

```
1001 sym> fi nodeconf
record initialized to default values
```

```
1001 sym> li *
```

```
file nodeconf contains the following records:
record #1
factory parameters
 0. partnum = 5#2848-STD-F-000804      1. dbversion= 0800
 2. ident  = <Null>    3. swdate  = 980426a  4. swversion= 0410
static parameters
 5. calarms = 10      6. swtype  = inf      7. portscan = normal
 8. unittype = BN2600  9. x25call = 255     10. x25mltpnt= no
11. enets   = 0      12. elinks  = 0
dynamic parameters
13. acctrec = 0      14. alarmrec = 10    15. itibusy = 0
16. rate1   = 0      17. rate2   = 0      18. rate3   = 0
19. rate4   = 0      20. nodeid  = 1001   21. exstat  = x25
22. rsttimer = 0     23. chgreqid = 0 0
```

```
1001 sym> fi vhsconf
record initialized to default values
```

```
1001 sym> li *
```

```
file vhsconf contains the following records:
record #1
factory parameters
 0. portname = L1
static parameters
 1. maxfsze = 256     2. burstlen = 1100   3. userbufs = 0
dynamic parameters
 4. eiatype  = X21bis  5. acctng   = none    6. baud    = 2048K
 7. mode    = exsync  8. billnum  = 000000000000
 9. debounce = 100    10. enable  = yes     11. segsize = 0
record #2
factory parameters
 0. portname = L2
static parameters
 1. maxfsze = 128     2. burstlen = 1100   3. userbufs = 0
dynamic parameters
 4. eiatype  = X21bis  5. acctng   = none    6. baud    = 64K
 7. mode    = exsync  8. billnum  = 000000000000
 9. debounce = 100    10. enable  = yes     11. segsize = 0
1001 sym>
```

4044207517

```
1000 sym> fi x25conf
record initialized to default values
1000 sym> li 1
```

file x25conf contains the following records:

```
record #1
factory parameters
 0. netname = net1
static parameters
 1. app = dte      2. autostart= enable  3. dlnumber = 1
 4. lic = 1       5. loc = 1       6. lpc = 1
 7. ltc = 20      8. nic = 0       9. noc = 0
10. npc = 19     11. ntc = 236
dynamic parameters
12. acktimer = 0  13. ackthresh= 0  14. nuireq = no
15. cugformat= basic  16. dbmod = no  17. defpsze = 256
18. defwsze = 2     19. deftpout = 9600  20. diagsupr = no
21. direction= twoway  22. flowneg = yes  23. fstacc = no
24. updnrcmd = 0    25. maxpsze = 256  26. maxwsze = 2
27. netaddr = 4044207517  28. nettype = upss  29. netvrslon= 1984
30. pktbuf = 0     31. stndbytim= 30  32. revacc = yes
33. thru neg = yes  34. tx0 = 180     35. tx1 = 200
36. tx2 = 180     37. tx3 = 180     38. xtend = no
1000 sym> fi nodeconf
record initialized to default values
1000 sym> li *
```

file nodeconf contains the following records:

```
record #1
factory parameters
 0. partnum = 5#2848-STD-F-000804      1. dbversion= 0800
 2. ident = <Null>  3. swdate = 980426a  4. swversion= 0410
static parameters
 5. calarms = 10  6. swtype = inf  7. portscan = normal
 8. unittyp = BN1503  9. x25call = 255  10. x25mltpnt= no
11. enets = 0    12. elinks = 0
dynamic parameters
13. acctrec = 0  14. alarmrec = 10  15. itibusy = 0
16. rate1 = 0   17. rate2 = 0     18. rate3 = 0
19. rate4 = 0   20. nodeid = 1000  21. exstat = x25
22. rsttimer = 0  23. chgreqid = 0 0
1000 sym> fi port
record initialized to default values
1000 sym> li *
```

file port contains the following records:

```
record #1
factory parameters
 0. portname = P25      1. service = iti
dynamic parameters
 2. acctng = none      3. baud = 9600
 4. billnum = 000000000000  5. class = terminal
 6. debounce = 100    7. dmarxnum = 8     8. enable = yes
 9. fcleve = 64      10. maxbpace= 960  11. minbpace= 480
12. mode = 8N1      13. type = none    14. porteia = 3wire
15. segsize = 0     16. timer1 = 10    17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl  20. idnum = 0
record #2
factory parameters
 0. portname = P26      1. service = iti
dynamic parameters
 2. acctng = none      3. baud = 9600
 4. billnum = 000000000000  5. class = terminal
 6. debounce = 100    7. dmarxnum = 8     8. enable = yes
 9. fcleve = 64      10. maxbpace= 960  11. minbpace= 480
12. mode = 8N1      13. type = none    14. porteia = 3wire
15. segsize = 0     16. timer1 = 10    17. timer2 = 0
```

```

18. dialcmd = 0      19. dialout = disabl  20. idnum = 0
record #3
factory parameters
 0. portname = P27    1. service = iti
dynamic parameters
 2. acctng = none     3. baud = 9600
 4. billnum = 000000000000    5. class = terminal
 6. debounce = 100    7. dmarxnum = 8    8. enable = yes
 9. fclvl = 64    10. maxbpace= 960    11. minbpace= 480
12. mode = 8N1    13. type = none    14. porteia = 3wire
15. segsize = 0    16. timer1 = 10    17. timer2 = 0
18. dialcmd = 0    19. dialout = disabl  20. idnum = 0
record #4
factory parameters
 0. portname = L17    1. service = link
dynamic parameters
 2. acctng = none     3. baud = 57600
 4. billnum = 000000000000    5. class = <Null>
 6. debounce = 100    7. dmarxnum = 8    8. enable = yes
 9. fclvl = 0    10. maxbpace= 11000    11. minbpace= 1851
12. mode = insync    13. type = none    14. porteia = x21bis
15. segsize = 0    16. timer1 = 10    17. timer2 = 0
18. dialcmd = 0    19. dialout = disabl  20. idnum = 0

record #16
factory parameters
 0. portname = L5    1. service = link
dynamic parameters
 2. acctng = usage     3. baud = 2048K    4. billnum = 4045293490
 5. class = <Null>    6. debounce = 100    7. dmarxnum = 8
 8. enable = yes    9. fclvl = 0    10. maxbpace= 11000
11. minbpace= 1851    12. mode = exsync    13. type = none
14. porteia = x21bis    15. segsize = 0    16. timer1 = 10
17. timer2 = 0    18. dialcmd = 0    19. dialout = disabl
20. idnum = 0
1000 sym> fi netmap
record initialized to default values
1000 sym> li *

file netmap contains the following records:
record #1
dynamic parameters
 0. netaddr = 0*    1. userdata = *    2. nodeid = 1
record #2
dynamic parameters
 0. netaddr = 4044207517    1. userdata = ``sym    2. nodeid = 2
record #3
dynamic parameters
 0. netaddr = 4044207517    1. userdata = ``trace    2. nodeid = 3
record #4
dynamic parameters
 0. netaddr = 4044207517    1. userdata = ``nms    2. nodeid = 5
record #5
dynamic parameters
 0. netaddr = *    1. userdata = *    2. nodeid = 32700
record #6
dynamic parameters
 0. netaddr = 4044207517    1. userdata = *    2. nodeid = 1001
record #7
dynamic parameters
 0. netaddr = 4044207517    1. userdata = ``hp    2. nodeid = 1
record #8
dynamic parameters
 0. netaddr = 4044207517    1. userdata = muxnms    2. nodeid = 1
record #9
dynamic parameters
 0. netaddr = 4044207517    1. userdata = 116    2. nodeid = 116

record #22
dynamic parameters

```

```

0. netaddr = 7709515165 1. userdata = ``sym    2. nodeid = 101
record #23
dynamic parameters
0. netaddr = 7709515165 1. userdata = ``trace 2. nodeid = 101
record #24
dynamic parameters
0. netaddr = 7709515165 1. userdata = *      2. nodeid = 101

```

```

1000 sym> fi netroute
record initialized to default values
1000 sym> li *

```

```

file netroute contains the following records:
record #1
dynamic parameters
0. nodeid = 1    1. service = iti    2. prio  = 100
record #2
dynamic parameters
0. nodeid = 2    1. service = sym    2. prio  = 100
record #3
dynamic parameters
0. nodeid = 3    1. service = trace   2. prio  = 100
record #4
dynamic parameters
0. nodeid = 5    1. service = nms    2. prio  = 100

record #16
dynamic parameters
0. nodeid = 101  1. service = net1   2. prio  = 100

```

```

1000 sym> fi vhsconf
record initialized to default values
1000 sym> li *

```

```

file vhsconf contains the following records:
record #1
factory parameters
0. portname = L1
static parameters
1. maxfsze = 256    2. burstlen = 1100    3. userbufs = 0
dynamic parameters
4. eiatype = X21bis  5. acctng = none    6. baud  = 2048K
7. mode   = exsync   8. billnum = 000000000000
9. debounce = 100   10. enable = yes    11. segsize = 0
record #2
factory parameters
0. portname = L2
static parameters
1. maxfsze = 128    2. burstlen = 1100    3. userbufs = 0
dynamic parameters
4. eiatype = X21bis  5. acctng = none    6. baud  = 64K
7. mode   = exsync   8. billnum = 000000000000
9. debounce = 100   10. enable = yes    11. segsize = 0
1000 sym>

```

4044207518

```
1000 sym> fi x25conf
record initialized to default values
1000 sym> li 1
```

file x25conf contains the following records:

```
record #1
factory parameters
 0. netname = net1
static parameters
 1. app = dte      2. autostart= enable  3. dlnumber = 1
 4. lic = 1       5. loc = 1       6. lpc = 1
 7. ltc = 20      8. nic = 0       9. noc = 0
10. npc = 19     11. ntc = 236
dynamic parameters
12. acktimer= 0   13. ackthresh= 0   14. nuireq = no
15. cugformat= basic 16. dbmod = no    17. defpsze = 256
18. defwsze = 2    19. deftpout = 9600 20. diagsupr = no
21. direction= twoway 22. flowneg = yes  23. fstacc = no
24. updnrcmd = 0   25. maxpsze = 256  26. maxwsze = 2
27. netaddr = 4044207518 28. nettype = upss 29. netvrslon= 1984
30. pktbuf = 0    31. stndbytim= 30  32. revacc = yes
33. thru neg = yes 34. tx0 = 180    35. tx1 = 200
36. tx2 = 180    37. tx3 = 180    38. xtend = no
1000 sym> fi nodeconf
record initialized to default values
1000 sym> li *
```

file nodeconf contains the following records:

```
record #1
factory parameters
 0. partnum = 5#2848-STD-F-000804      1. dbversion= 0800
 2. ident = <Null>  3. swdate = 980426a  4. swversion= 0410
static parameters
 5. calarms = 10    6. swtype = inf    7. portscan = normal
 8. unittype = BN1511 9. x25call = 255  10. x25mltpnt= no
11. enets = 0      12. elinks = 0
dynamic parameters
13. acctrec = 0    14. alarmrec = 10  15. itibusy = 0
16. rate1 = 0     17. rate2 = 0     18. rate3 = 0
19. rate4 = 0     20. nodeid = 1000 21. exstat = x25
22. rsttimer = 0  23. chgreqid = 0 0
1000 sym> fi port
record initialized to default values
1000 sym> li *
```

file port contains the following records:

```
record #9
factory parameters
 0. portname = P25      1. service = iti
dynamic parameters
 2. acctng = none      3. baud = 9600
 4. billnum = 00000000000000000000 5. class = terminal
 6. debounce = 100    7. dmarxnum = 8    8. enable = yes
 9. fcleve = 64      10. maxbpace= 960  11. minbpace= 480
12. mode = 8N1      13. type = none    14. porteia = 3wire
15. segsize = 0     16. timer1 = 10    17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl 20. idnum = 0
record #10
factory parameters
 0. portname = P26      1. service = iti
dynamic parameters
 2. acctng = none      3. baud = 300
 4. billnum = 00000000000000000000 5. class = terminal
 6. debounce = 100    7. dmarxnum = 8    8. enable = yes
 9. fcleve = 64      10. maxbpace= 960  11. minbpace= 480
12. mode = 8N1      13. type = none    14. porteia = 3wire
```

```

15. segsize = 0      16. timer1 = 10      17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl  20. idnum = 0
record #11
factory parameters
 0. portname = P27   1. service = iti
dynamic parameters
 2. acctng = none    3. baud = 9600
 4. billnum = 000000000000      5. class = terminal
 6. debounce = 100    7. dmarxnum = 8      8. enable = yes
 9. fcleve = 64      10. maxbpace= 960    11. minbpace= 480
12. mode = 8N1      13. type = none     14. porteia = 3wire
15. segsize = 0     16. timer1 = 10     17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl  20. idnum = 0
record #12
factory parameters
 0. portname = L17   1. service = link
dynamic parameters
 2. acctng = none    3. baud = 57600
 4. billnum = 000000000000      5. class = <Null>
 6. debounce = 100    7. dmarxnum = 8      8. enable = yes
 9. fcleve = 0      10. maxbpace= 11000  11. minbpace= 1851
12. mode = insync   13. type = none     14. porteia = x21bis
15. segsize = 0     16. timer1 = 10     17. timer2 = 0
18. dialcmd = 0     19. dialout = disabl  20. idnum = 0
record #24
factory parameters
 0. portname = L5    1. service = link
dynamic parameters
 2. acctng = usage    3. baud = 2048K      4. billnum = 4045293490
 5. class = <Null>    6. debounce = 100    7. dmarxnum = 8
 8. enable = yes      9. fcleve = 0      10. maxbpace= 11000
11. minbpace= 1851   12. mode = exsync   13. type = none
14. porteia = x21bis  15. segsize = 0     16. timer1 = 10
17. timer2 = 0      18. dialcmd = 0     19. dialout = disabl
20. idnum = 0
1000 sym> fi netmap
record initialized to default values
1000 sym> li *

file netmap contains the following records:
record #1
dynamic parameters
 0. netaddr = 0*      1. userdata = *      2. nodeid = 1
record #2
dynamic parameters
 0. netaddr = 4044207518 1. userdata = ``sym  2. nodeid = 2
record #3
dynamic parameters
 0. netaddr = 4044207518 1. userdata = ``trace 2. nodeid = 3
record #4
dynamic parameters
 0. netaddr = 4044207518 1. userdata = ``nms  2. nodeid = 5
record #5
dynamic parameters
 0. netaddr = 7709515166 1. userdata = *      2. nodeid = 101
record #6
dynamic parameters
 0. netaddr = 4044207518 1. userdata = *      2. nodeid = 1
record #7
dynamic parameters
 0. netaddr = 4044207518 1. userdata = ``hp  2. nodeid = 1

record #22
dynamic parameters
 0. netaddr = 7709515166 1. userdata = ``sym  2. nodeid = 101
record #23
dynamic parameters
 0. netaddr = 7709515166 1. userdata = ``trace 2. nodeid = 101
record #24
dynamic parameters

```

```
0. netaddr = 7709515166 1. userdata = *      2. nodeid = 101
```

```
1000 sym> fi netroute
record initialized to default values
1000 sym> li *
```

```
file netroute contains the following records:
record #1
dynamic parameters
 0. nodeid = 1      1. service = iti    2. prio  = 100
record #2
dynamic parameters
 0. nodeid = 2      1. service = sym     2. prio  = 100
record #3
dynamic parameters
 0. nodeid = 3      1. service = trace   2. prio  = 100
record #4
dynamic parameters
 0. nodeid = 5      1. service = nms     2. prio  = 100
unused record

record #16
dynamic parameters
 0. nodeid = 101    1. service = net1    2. prio  = 100
```

```
1000 sym> fi vhs1conf
record initialized to default values
1000 sym> li *
```

```
file vhs1conf contains the following records:
record #1
factory parameters
 0. portname = L1
static parameters
 1. maxfsze = 256   2. burstlen = 1100   3. userbufs = 0
dynamic parameters
 4. eiatype = X21bis 5. acctng = none     6. baud  = 2048K
 7. mode   = exsync  8. billnum = 000000000000
 9. debounce = 100 10. enable = yes     11. segsize = 0
record #2
factory parameters
 0. portname = L2
static parameters
 1. maxfsze = 128   2. burstlen = 1100   3. userbufs = 0
dynamic parameters
 4. eiatype = X21bis 5. acctng = none     6. baud  = 64K
 7. mode   = exsync  8. billnum = 000000000000
 9. debounce = 100 10. enable = yes     11. segsize = 0
1000 sym>
```


Cisco router configurations

alabc0iii

```

alabc0iii#wr t
Building configuration...

Current configuration:
!
version 12.0

service udp-small-servers
service tcp-small-servers
!
hostname alabc0iii
!
ip subnet-zero
ip cef
x25 routing
clock timezone CST -6
clock summer-time CDT recurring
!
interface Loopback0
 ip address 135.19.1.7 255.255.255.255
 no ip directed-broadcast
!
interface FastEthernet0/0/0
 ip address 135.19.120.11 255.255.255.0
 no ip directed-broadcast
 no ip route-cache cef
 no ip route-cache distributed
!
interface Serial1/0
 description cable to accu-ring cpu x25 pad, ps=128
 bandwidth 2000000
 no ip address
 no ip directed-broadcast
 encapsulation x25 dce
 no ip mroute-cache
 x25 address 4044207517
 x25 ltc 20
 x25 htc 255
 x25 ips 256
 x25 ops 256
 clockrate 2000000
!
interface Serial1/1
 description MMOC end ACP xot test for E1/T1 to 3640
 bandwidth 2000000
 no ip address
 no ip directed-broadcast
 encapsulation x25 dce
 no ip mroute-cache
 x25 address 4044207518
 x25 ltc 20
 x25 htc 255
 x25 ips 256
 x25 ops 256
 clockrate 2000000
!
router eigrp 101
 network 135.19.0.0
!
ip classless
!
x25 route 1234567890 xot 135.190.75.71

```

John E. Carter

```
x25 route 4044207517 interface Serial1/0
x25 route 0987654321 interface Serial1/1
x25 route 4044207518 interface Serial1/1
x25 route 7709515166 xot 135.20.248.6
x25 route 7709515165 xot 135.19.8.2
!
end

alabc0iii#
```

athngac0

```
athngac0#wr t
Building configuration...

Current configuration:
!
! No configuration change since last restart
!
version 12.0
!
hostname athngac0
!
ip subnet-zero
x25 routing
clock timezone CST -6
clock summer-time CDT recurring
!
interface Loopback0
ip address 135.19.2.5 255.255.255.252
no ip directed-broadcast
!
interface Ethernet0/1
ip address 135.19.34.3 255.255.255.192
no ip redirects
no ip directed-broadcast
standby priority 105
standby preempt
standby ip 135.19.34.1
!
interface Serial2/0
bandwidth 1544
ip address 135.19.8.2 255.255.255.252
no ip directed-broadcast
!
interface Serial2/1
no ip address
no ip directed-broadcast
encapsulation x25 dce
no ip mroute-cache
x25 ltc 20
x25 htc 255
x25 ips 256
x25 ops 256
clockrate 149322
!
router eigrp 101
passive-interface Ethernet0/1
network 135.19.0.0
!
ip classless
!
logging 135.19.25.99
snmp-server community public RW
x25 route 7709515165 interface Serial2/1
x25 route 4044207517 xot 135.19.120.11
!
end

athngac0#
```

guam01

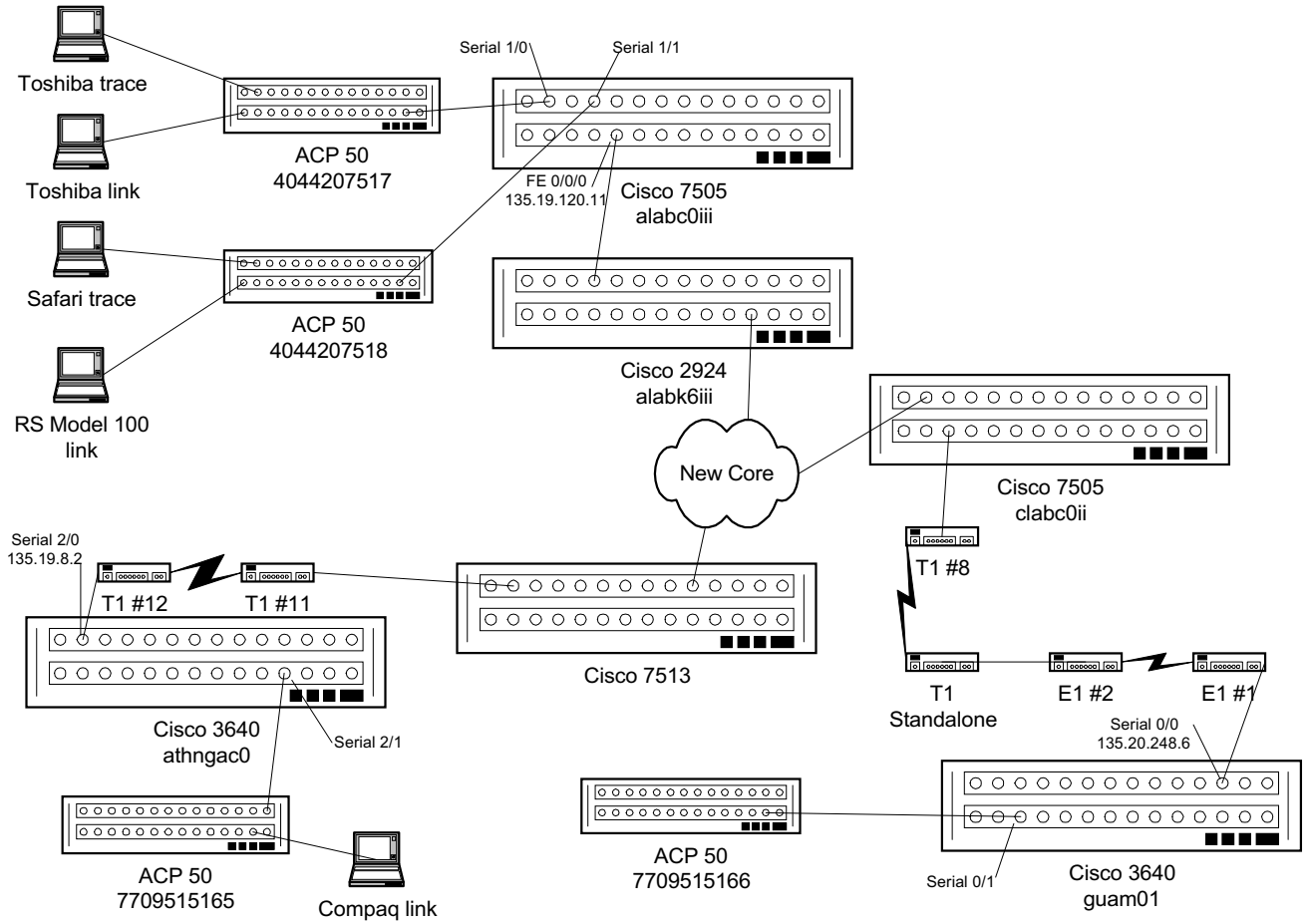
```
guam01#wr t
Building configuration...

Current configuration:
!
version 12.0
!
hostname guam01
!
ip subnet-zero
x25 routing
clock timezone CST -6
clock summer-time CDT recurring
!
interface Loopback0
ip address 135.20.1.5 255.255.255.255
no ip directed-broadcast
!
interface Serial0/0
ip address 135.20.248.6 255.255.255.252
no ip directed-broadcast
!
interface Serial0/1
bandwidth 2000000
no ip address
no ip directed-broadcast
encapsulation x25 dce
no ip mroute-cache
x25 address 7709515166
x25 ltc 20
x25 htc 255
x25 ips 256
x25 ops 256
clockrate 2015232
!
router eigrp 102
network 135.20.0.0
no auto-summary
!
ip classless
!
snmp-server community public RO
x25 route 7709515166 interface Serial0/1
x25 route 4044207518 xot 135.19.120.11
!

end

guam01#
```

Network Map



Scripts

The PC's which run the Mirror scripts are of three types:

1. Toshiba 8088 laptops (DOS only)
2. Compaq 286 laptop (DOS/Windows 2)
3. Safari 386sx laptop (DOS/Windows 3)

The Compaq and Toshiba laptops use 720K 3.5" disks; the Safari has a hard disk and can also use 1.44M 3.5" disks. The Compaq and the Toshiba's boot and run from floppy disk. The Safari boots and runs from its hard drive. The Mirror program and the various support files are copied into a RAM disk that is created during the boot process. Running the scripts from RAM disk is much faster than using files on floppy disks. When Mirror starts up, it extracts communications configuration parameters from a xxxxx.xtk file, then runs the command script in the companionxxxxx.xts file. xxxxx is a generic name for the script files which have different names on each PC.

The external difference between 720K and 1.44M disks? The 1.44M disks have square holes at two corners; the 720K disks have a hole at only one corner. Note that 1.44M floppy drives can read and write 720K disks, but the reverse is NOT true.

Safari

Note: Items in this font are informational and are not part of the program.

The Safari runs MS-DOS 6.22 and boots from its hard drive. The boot menu automatically selects the Telematics controller scripts after 30 seconds. The Mirror script is ciscotrc.xts.

```

wa ti 50                set response timeout to 5.0 seconds
wh list                define actions when items in list are received
"directive" al 2n : wa qu 200 : do ciscotrc    ACP error: beep, wait 20 sec., restart
"imeout" al 2n : wa qu 200 : do ciscotrc      network delay: beep, wait 20 sec., restart
.                end definition
re clr|                send clear request
wa c "*"                wait for a '*'
wa qu 12                wait for 1.2 seconds of quiet
re 7709515166*`trace|  send connect string
wa s "page"            wait for 'page'
wa qu 4                 wait for 0.4 seconds of quiet
re ^P                  send control-P
wa c "*"                wait for a '*'
wa qu 2                 wait for 0.2 seconds of quiet
The above connect and disconnect (from re clr| to wa qu 2) repeats 49 more times.
do ciscotrc            Restart this script at the beginning.

```

*Toshiba Trace***- 4044207517 (upper PC)**

Note: Items in this font are informational and are not part of the program.

The Toshiba laptops run Toshiba DOS 3 and are floppy-only PC's. The upper floppy (drive A) has the operating system. The lower floppy (drive B) has the Mirror program and the scripts needed for the PC.

```
wa ti 50
wh list
"directive" al 2n : wa qu 200 : do cisco
"imeout" al 2n : wa qu 200 : do cisco
```

See header comments in Safari section.

```
.
re clr|
wa c "*"
wa qu 12
re 7709515165*`trace|
wa s "page"
wa qu 4
re ^P
wa c "*"
wa qu 2
```

The sequence from "re clr|" through "wa qu 2" repeats 49 times, then the script restarts.
do cisco

*Toshiba Link***- 4044207517 (lower PC)**

Note: Items in this font are informational and are not part of the program.

The Toshiba laptops run Toshiba DOS 3 and are floppy-only PC's. The upper floppy (drive A) has the operating system. The lower floppy (drive B) has the Mirror program and the scripts needed for the PC.

first script: cisco.xts

```

wa ti 50
wh l
"no add" al 2n : wa qu 200 : do cisco
"reset" re |
"imeout" al 2n : wa qu 600 : do cisco
"page" re |
.
re exit|
wa qu 8
re ^P
wa qu 8
re clr|
wa s "*"
wa qu 8
re 7709515165*`sym|
wa s "ident"
re pass|
wa s "sym"
re fi nodeconf|
wa s "sym"
re li 1|
wa s "sym"
re exit|
wa s "*"
wa qu 8

```

See header comments in Safari section.

The above "re clr|" through "wa qu 8" sequence repeats 100 times, then this script calls another script.

```
do telemat
```

second script: telemat.xts

```

wa ti 50
wh l
"no add" al 2n : wa qu 200 : do cisco
"imeout" al 2n : wa qu 600 : do cisco
"page" re |
.
re li 1|
wa s "sym"

```

See header comments in Safari section.

The "re li 1|" through "wa s "sym"" sequence repeats 2,315 times, then this script calls the first script again.

```
do cisco
```

Compaq Link
- 7709515165

Note: Items in this font are informational and are not part of the program.

The Compaq runs DOS 3 and is a floppy-only PC. The floppy has the operating system, the Mirror program, and the scripts needed for the PC.

wa ti 50 See header comments in Safari section.

wh l

"no add" al 2n : wa qu 200 : rw

"cannot" al 2n : wa qu 200 : rw

"imeout" al 2n : wa qu 600 : rw

.

re exit|

wa s "*"

wa qu 12

re 4044207517*`sym|

wa s "ident"

wa qu 8

re pass|

wa s "sym"

wa qu 8

re fi port|

wa s "sym"

wa qu 8

re li 1|

wa s "sym"

wa qu 8

re exit|

The sequence from "wa s "*" through "re exit|" repeats 63 times, then this script calls another script.

do telemat

wa ti 50 See header comments in Safari section.

when list

"no add" wa qu 100 : do cisco

"imeout" al 2n : wa qu 200 : do cisco

.

re fi nodeconf|

wa s "sym"

wa qu 4

re li *|

wa s "sym"

The sequence from "wa qu 4" through "wa s "sym"" repeats 1,024 times, then this script calls the previous script.
do cisco

Model 100 BASIC

Note: Items in this font are informational and are not part of the program.

```

1 CLS : PRINT "Simple 300 baud terminal program"      Clear screen, provide info
2 PRINT "for generating Telematics traffic."
3 PRINT "Hit ESC while running to end terminal session."
5 A = 0:S = 0                                         Initialize some variables
6 B$ = "":A$ = ""
7 PRINT "Hit ENTER to continue:"; INPUT T$: CLS      Prompt user to continue, clear screen
8 MAX FILES = 5                                       Initialize some more variables
9 S$ = DATE$

Configure and open the communications port
10 CLOSE : OPEN "com:38n1e" FOR OUTPUT AS 1: OPEN "com:38n1e" FOR INPUT AS 2
20 PRINT #1, CHR$(17)                                  Send X-on in case line is held
30 ON COM GOSUB 1000                                  When character received, go process it
35 COM ON                                             Enable communications port trapping
40 E$ = INKEY$                                        Watch for user hitting key
50 IF E$ = CHR$(27) THEN CLOSE : END                 Quit if ESC
60 IF E$ < > "" THEN PRINT #1, E$;                  Otherwise send the character
70 GOTO 35                                           Back to top of communications loop
1000 COM STOP                                        Stop trap of incoming characters
1005 B$ = A$                                         Save previously received character
1009 A$ = INPUT $(1,2): PRINT A$;                    Get and display incoming character(s)
1010 IF A$ = "." AND B$ = "t" THEN PRINT #1,"exit": RETURN Disconnect if stale
1011 IF A$ = ":" AND B$ = "n" THEN PRINT #1, "pass"  Send password
1013 IF A$ = ">" AND B$ = "m" THEN PRINT #1, "exit":S = S + 1 Disconnect after login
1015 IF A$ = "*" AND (B$ = CHR$(10) OR B$ = CHR$(13)) THEN A = A + 1: PRINT A;" ";S;"
";S$;" "; TIME$: PRINT #1, "7709515166*`sym"        Send another connection request
1020 IF INKEY$ = CHR$(27) THEN CLOSE : END          Quit if user hits ESC
1035 RETURN                                          Character(s) processed, go back for more
1040 PRINT #1, "net1.trace +all"                     Setup command for trace process
1045 RETURN

```

Supporting Programs

Mirror

- DOS communications program from SoftKlone (obsolete software)

Mirror documentation is online via its internal Help system. The status line at the bottom of the screen shows the currently defined Command key, such as "Esc for Command". To access Help, press the Comamnd key, then type "he" and Enter at the "Command?" prompt.

MIRROR Command List

This menu allows you to get an overview of the many commands available in MIRROR. The commands are grouped by function. Press a letter from the menu below to get a brief description of each of the commands in the group. Option L provides an overview of the status screen. For more detailed help on any command press return to go back to the status screen and enter he xx where xx is the first two characters of the command. For general help on topics not related to any one specific command enter he ??.

- | | |
|----------------------------------|----------------------------|
| A - This screen | G - Script Commands |
| B - Modem Control Commands | H - Special Key Settings |
| C - Serial Port Control | I - System Commands |
| D - Video Display Controls | J - Security Features |
| E - Text File Transfer | K - Miscellaneous Commands |
| F - Binary File Transfer | |
| L - How to use the status screen | |

This is the first page of the Help entry for Scripts (item G on the Command List menu). Each of these entries also has a Help page.

Script Commands

Any MIRROR command may be used in a script file. The commands in this list are commands that would be used almost only in script files.

- | | |
|---------|---|
| Abort | - terminate the script |
| Alarm | - sound one of MIRROR's alarms |
| Ask | - ask for keyboard input from user |
| Clear | - clear the screen |
| Do | - invoke a script |
| If | - test conditions inside script |
| Jump | - branch to another line in script |
| Label | - destination for Jump or Skip |
| Lrn | - automatic script file creation (learn mode) |
| Message | - display a message to user |
| Reply | - send characters to the other system |
| Rturn | - return to previous (nested) script file |
| Rwind | - rewind and re-start current script file |
| Sbreak | - transmit a break signal |
| Skip | - same as Jump |
| Wait | - wait for data from the other system |
| When | - test for receipt of specific string |

TEENY

- Model 100 to DOS file transfer program (freeware)

Club 100: A Model 100 User Group
P.O. Box 23438, Pleasant Hill, CA 94523-0438
925-932-8956, 937-5039 fax, 939-1246 bbs, www.the-dock.com/club100.html

LOADING TEENY AND LOADING TS-DOS

by Rick Hanson

3/25/99

The following program is offered free of charge to help Model 100 and 102 users access DeskLink (see disk and manual) if they do not already have a DOS (FLOPPY.CO or FLOPPY) in their Model 100 or 102. TS-DOS on ROM is highly recommend, or any of the TS-DOS Loaders on ROM, as available on the Ultimate ROM II or Sardine ROM available from Club 100 (see catalog)

Relax... you do not have to key this program into your Model 100/102. It's on the DeskLink disk in the ROOT subdirectory. You simply have to link your Model 100/102 to your DOS/Windows computer via a null-modem cable and load it manually. Here's how you do that:

Connect your Model 100/102 to your DOS/Windows computer via a null-modem cable. You "must" know what COM port you are using on your DOS/Windows computer, i.e. COM1, COM2, etc.

NOTE: This assumes that you have downloaded the DL-ARC.EXE file from the Club 100 web site, have loaded it into a sub-directory (AKA folder) named c:\root and have run the DL-ARC.EXE to dislodge its contents.

Go into the C:\ROOT direstory.

Go to the DOS prompt on your DOS/Windows computer.

Enter TEENY /? and hit enter. Explanation and options show on screen.

Enter TEENY and hit enter. With no options this uses COM1 at 19200 Baud.

It aborts for any device other than a Model 10x laptop, such as

a Model 200, NEC PC-8201A, modem, etc. -- no harm is done.

Just do what it says. You end up with DeskLink going in your DOS/Windows computer, and TEENY.CO going in the laptop.

NOTE: After you use TEENY.CO for awhile, you will want to try TS-DOS RAM version. It is in the archive as DOS100.CO. Use TEENY.CO to load DOS100.CO. After it is loaded, do the following:

Exit teeny

Go into BASIC

Key in the following commands, hitting enter after each one:

kill"teeny.co"

clear0,57100

menu

Exit BASIC

Put your bar cursor over DOS100.CO and hit enter

The docs for TS-DOS are in the Library Documentation category at the

Club 100 web site.

DOCS FOR TEENY
by Ron Wiesen
3/25/99

TEENY is equivalent to TINY in function, but it consumes less memory and you can create TEENY.CO for location anywhere in HIMEM. Using TEENY.EXE, your PC injects TEENY.CO into your laptop. Along with this injection of TEENY.CO you may also deposit the "laptop-based injector" of TEENY.CO, which is named TEENY.BA. Having TEENY.BA means you have the means inject TEENY.CO without involving your PC.

TEENY MANUAL

General

Teeny does file Kill/Load/Save on disk Bank 0. Using only 747 bytes of HIMEM memory, it is teeny!

Prompt and Command Syntax

Teeny has 4 commands: Kill Load Save Quit

Prompt:
> C FFFFFFFF.XX (C=KLSQ)
>

Use all upper case letters and space-pad file names (NAME__ .DO for Name.Do).

Kill syntax:
K [FILE__.]
Load syntax:
L [FILE__.]
Save syntax:
S [FILE__.]
Quit syntax:
Q [Q]

File Name Memory

Teeny remembers the last file name you typed. All commands need a file name and Teeny uses the remembered file name when you don't explicitly supply one. Even the Quit command needs a file name, but the name does not have to be legitimate. The 2-command example below overwrites a disk file.

```
> K NAME .DO
> S
```

Error Codes

If trouble is encountered, Teeny issues one of the following 2-letter error codes:

SN SyNtax

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NM NaMe illegal (e.g. 4SCORE.DO)
 FF File not Found
 NR RS232 Not Ready for disk access
 ND No Disk in drive
 WP Write-Protected disk (Save)
 AE file Already Exists, disk or memory
 DF Drive directory Full (Save)
 FL FuLL memory directory (Load)
 OM Out of Memory (Load)
 CM CoMmunication error
 IO I/O error RS232

The Load command can not overwrite a file in memory. You must Quit Teeny, kill the file in memory, then invoke Teeny again to load the file from disk. The example below shows the "discovery" that the file exists in memory, and the Quit of Teeny.

> L NAME .DO

AE err (file Already Exists in memory)
> Q

The 6-command example below shows a comedy of errors that finally overwrites a disk file.

> S NAME .DO

NR err (plug in cable, power on drive)

> S

ND err (insert disk)

> S

WP err (remove disk write-protect)

> S

AE err (file Already Exists on disk)

> K
> S

Beefs, Tips, Quirks and Humor

1. I keep pressing the <Q> key but Teeny refuses to Quit.

Use <Q> <Q> to Quit. Or, you could press the reset button. But, <BREAK> won't Quit Teeny.

2. I press a function key and Teeny goes nuts and pukes and scrolls the screen.

NEWS FLASH - When running Teeny from BASIC, don't press any function key. If you do, whatever string is assigned ("Files", "Load ", or God

forbid "K MYFILE.DO") is fed to Teeny for consumption.

3. Everything was going well. It was cool. I was a Loadin'/Savin' dude with Teeny. But now, Teeny just sits there - stoned.

Your disk drive took a break - in low power mode.

4. I created file DAMNED.2B but Teeny won't Save it. What gives?

With some devilish application programs, you can make a file name extension that Teeny is willing to Save your but the disk drive doesn't like the file name extension.

To absolve your sin, go to BASIC and kill the file. Follow the Marine Corps motto "Kill 'em all and let God sort 'em out." if there are other files in memory that have bad file name extensions.

DeskLink

- DOS to Model 100 file transfer program (freeware)

INTRODUCTION TO DeskLink

DeskLink is a program that emulates the Tandy Portable Disk Drive 2 on your IBM PC, XT, AT, or compatible computer. In plain English, this means that DeskLink makes one of the drives on a PC-compatible computer act like a portable disk drive.

Once DeskLink is running on your PC-compatible computer you can exchange files with any of these notebook computers: the Tandy 100, 102, or 200 or the NEC PC-8201A or PC-8300.

DeskLink is part of a pair of programs. The other part is TEENY or some other program that operates the Tandy Portable Disk Drive 2. When you are using DeskLink, the disk-operating program operates one of the drives of the PC-compatible as though it were a portable disk drive.

The first step to transferring files is to connect your computers by cable. Then start DeskLink on your PC-compatible computer. Finally, on your notebook computer start the program that operates the Tandy Portable Disk Drive 2.

While transferring files you will confine your attention to the notebook computer and operate it just as though you were accessing the portable drive.

CONNECTING THE COMPUTERS

DeskLink can exchange information between computers only if they are connected by cable through their RS-232C serial ports

Tandy 100 or 102 or NEC Computers. If you have the Tandy 100 or 102 or either NEC notebook computer you can use a standard null modem cable to make this connection. (Depending on the null modem cable you have, you may need to use a gender-changer.) Attach one end of the cable to either the COM1 or COM2 serial port of your PC-compatible computer. Attach the other end to the RS-232C serial port of your notebook computer.

CREATING A DIRECTORY FOR DeskLink

You are about to create a directory for DeskLink on your PC-compatible computer. This directory will-

- store the operating program for DeskLink and
- store files for transfer between your notebook computer and your PC-compatible computer

This directory will receive the files you transfer from your notebook computer. Any files you want to transfer from your PC-compatible computer must be moved into this directory before you run DeskLink.

We suggest that you name this directory ROOT. You may choose a different name, but ROOT is the default directory for DeskLink. By settling for ROOT you will save yourself a few keystrokes each time you run DeskLink. (See STARTING DeskLink ON A PC-COMPATIBLE COMPUTER)

Regardless of its name, this directory must reside at the second level in the hierarchy of directories on a disk-that is, immediately below the actual root directory of your disk. DeskLink will not transfer files into or out of the actual root directory.

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On Hard Disk Computers. To create a directory for DeskLink on a hard disk computer, turn on your computer and type this at the system prompt (usually C>):

MKDIR \ROOT

Now log onto the directory you just created. At the system prompt type-

CD \ROOT

STARTING DeskLink ON A PC-COMPATIBLE COMPUTER

To start DeskLink log onto the drive and directory in which you have installed DeskLink.COM on your PC-compatible computer, as instructed earlier.

Then at the system prompt enter a command in this format:

DeskLink \DIR /2 /S

Only DeskLink is required in every case. Whether and how you include the other items depends on these factors:

\DIR

This item specifies the name of the directory in which files copied from your notebook computer will be stored in your Pc-compatible computer. If you specify no directory, a directory named ROOT will be assumed. (This is why we suggest that you create a ROOT directory for DeskLink.) To specify a different directory, type \ followed immediately by the name of that directory.

/2

If you attached the null modem cable to the COM2 serial port of your PC-compatible computer, type /2. But if you attached the cable to the COM1 serial port, Omit this item.

/S

This item directs DeskLink to transfer information at a slower rate-9600 baud instead of 19200. You should not have to type this item unless you are sure that your computer does not operate at 19200 baud. If you are unsure, Omit this item at the outset, but if you get a communication error when you try to access the PC-compatible computer, exit DeskLink and include this item when you restart the program.

Note: For a reminder of the options available for starting DeskLink, you can refer to the screen of your PC-compatible computer. At the system-prompt you use when you start the program, type-

DeskLink /?

Examples: If you have created a MISC directory for DeskLink (instead of ROOT) and have attached the null modem cable to the COM2 serial port, start DeskLink by typing this at the appropriate system prompt on your PC-compatible computer:

DeskLink \MISC /2

If you have created a ROOT directory but are operating through the COM2 serial port and must operate at the slower rate of transmission (9600 baud), type this:

DeskLink /2 /S

THE DeskLink SCREEN

Once DeskLink is running on your PC-compatible computer you will see a screen indicating-

- the directory now active on your PC-compatible computer--either ROOT or whatever you have named the DeskLink directory instead of ROOT
- the serial port--COM1 or COM2--you are communicating through
- the transfer rate--either 19200 or 9600 baud

The DeskLink screen will not change as long as DeskLink remains active. Since control of the disk drive on your PC-compatible computer has now been turned over to TS-DOS (or whatever disk-operating system you are using), you must now transfer your attention to your notebook computer to access files on the PC-compatible computer.

To use TEENY with DeskLink any time after the first, follow these steps:

1. Connect your computers by cable.
2. Run DeskLink on your PC-compatible computer.
3. Run TEENY on your notebook computer.

TRANSFERRING FILES

Once DeskLink is started on your PC-compatible computer and the PC-compatible and notebook computers are properly connected, you are ready to use the disk-operating program on your notebook computer to transfer files between the two computers.

TRANSFERRING NOTEBOOK FILES

Files created on your notebook computer will be transferred to your PC-compatible computer--and back to your notebook computer--with their file names unchanged. When you view the menu of files you have transferred to the PC-compatible computer, you will see file names like CONFIG.DO, TSLOAD.CO, TC1.BA, and so on.

Caution: Your notebook computer makes certain assumptions about files on the basis of their extensions. Do not change those extensions while the files are stored in your PC-compatible computer. If you try to copy files back into your notebook computer with the wrong extensions you run the risk of cold starting your notebook computer.

TRANSFERRING PC-COMPATIBLE FILES

Files created on your PC-compatible computer can be transferred to your notebook computer only on these conditions:

1. The files must be in executable (.CO), tokenized BASIC (.BA) or ASCII format (.DO). (Files created by most word processors must be converted to ASCII; otherwise you will see unusable characters when you view them on your notebook computer.)
2. File names must contain no more than 6 characters and they must have the correct extension.
3. The files must be transferred to the ROOT directory or whatever directory it is that you have created for DeskLink.

LEAVING DeskLink

Once you are through transferring files press F10 or Ctrl-C on your PC-compatible computer to leave the program and return to the operating system.

It does not matter whether you leave DeskLink before or after exiting TEENY.

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