

Date: April 29, 1986

To: David Goyne, Tom King, Ken Brookner

Cc: Carroll Reeves, Doug Davis, Sam Sawyer, Frank Durda

From: Gary Kueck, Technical Support

Subject: Report on trip to Weyerhaeuser (Centenial Homes) in Dallas  
(DT-100 Problems with Multi-terminal Boards)

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At the TC-Bug meetings last week, a problem was brought up concerning Multi-terminal boards missing characters when used with DT-100's and Xenix. The problem seems to be that Xenix (z80ctl) is not getting the characters quickly enough from the Multi-Terminal boards causing them to be lost. The problem does not seem to occur with the console or serial channel A or B. They have three times the storage for characters.

On Friday the 25th, Doug Davis (Customer Service) and I went to Weyerhaeuser's site in Dallas to try and reduce their problem. Several things were done to their system.

1. The RTS Signal was cut & grounded. Frank Durda (System Software), suggests this since the UARTS have a 'bug' in the handling of this signal.
2. The resistor connected to DTR was removed from +12 and switched to -12. Bob Snapp suggested this to the customer. This should help with the problem Xenix has with terminals that are connected but turned off.
3. The order of the boards in the card cage was changed to locate the Multi-terminal boards at the bottom of the card cage, before the hard disk interface. This puts their interrupt priority ahead of the hard disk. Frank Durda thought that although this will not help with the lost character problem, it might help with other minor problems.

The above modifications were tested on techcomm (department computer) for several days before being tried on the customers site. None of the above 'fixes' did anything for the customer's problem. The two below did.

4. The baud rate for all terminals was reduced to 4800 baud. This allows the Z80 twice as much time to receive the characters. This needed to be done to all terminals, not just the ones with the problem. Even though the baud rate was cut in half, the speed drop was nowhere near half, due to system overhead.
5. The priority on update & cron was reduced to 39. This will reduce the load on the system under heavy use (swap).

(over)

The above modifications did not cure the customer's problem, just reduce them greatly. Some sort of change to the hardware or software will be required to cure the problem completely.

Sam Sawyer has a potential hardware modification that may not work on all terminals all the time. He feels a software modification would be a cleaner way to fix the problem, if one can be found.