http://groups.google.com/d/topic/comp.dcom.modems/gA5a9ugoWcM/discussion

comp.dcom.modems ›

Telebit registers

9 posts by 9 authors

Ed Wells

5/21/89

  After calling another Telebit modem in PEP mode, have you ever gone back to local mode and checked out the S60's and S70's registers while the connection was connected? I did and found what appears to be several line/carrier condition tables with the grade of each of the 511 carriers.
  I tried making a local call several times to the same number and noticed that each time I found small differences in these numbers (I assume the line sampled slightly differently each time).

  For those hacker types, you may want to try to obtain exactly what type of connection you have on your long distance calls. I don't know, but Telebit themselves may actually be interested in this information for modem evaluation.

  No matter what these numbers come up with, I'm very happy with my Telebit modem. This still appears to the the Cadillac of the 19,200 baud modems.

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==========
Edward E. Wells Jr., President   Voice: (215)-943-6061
Wells Computer Systems Corp., Box 343, Levittown, Pa. 19058
{dsinc,francis,hotps,lgnp1,mdi386,pebco}!wells!edw

Click here to Reply

Russell Lawrence

5/24/89

In article <49@wells.UUCP>, edw@wells.UUCP (Ed Wells) writes:
>   After calling another Telebit modem in PEP mode, have you ever gone
> back to local mode and checked out the S60's and S70's registers while
> the connection was connected? I did and found what appears to be
> several line/carrier condition tables with the grade of each of the 511

> carriers.   ^^^^
Could someone please post how-to info on interpreting the table? I've tried checking the contents of register 76, but what I get is a listing that varies from eight numbers to about a hundred... *not* 511.

BTW, Ed mentioned in a previous article that he was unable to get his TB+ to work faster than 9600 on outgoing calls. My uucico supports 19.2 kbs calls, but I've never (ever) been able to get a throughput of more than 700 bytes per second. One of my net neighbors thinks the problem might be line noise, but I'm beginning to suspect that something else is wrong. If anyone else has encountered a similar problem, how about sharing the solutions?
--
Russell Lawrence, WP Group, New Orleans (504) 443-5000
uunet!wpg!russ

George Robbins

5/25/89

In article <1182@wpg.UUCP> russ@wpg.UUCP (Russell Lawrence) writes:
> In article <49@wells.UUCP>, edw@wells.UUCP (Ed Wells) writes:
>

> BTW, Ed mentioned in a previous article that he was unable to get his
> TB+ to work faster than 9600 on outgoing calls. My uucico supports
> 19.2 kbs calls, but I've never (ever) been able to get a throughput
> of more than 700 bytes per second. One of my net neighbors thinks

> about sharing the solutions?

Are you sure your neighbor isn't running with an interface rate set to
9600 baud, either via "fixing" the baud rate with the S-registers or
letting the "incoming" baud rate default to the speed at which he last
talked to the modem?

This is a "problem" I've seen a couple of times, it's really not obvious
what the TB's are up to, since they will automatically do baud rate
adaption. The numbers are a clue though, since 700 char/sec is in the
ball park thruput you get at a 9600 baud interface rate.
--
George Robbins - now working for,   uucp: {uunet|pyramid|rutgers}!cbmvax!grr
but no way officially representing   arpa: cbmvax!g...@uunet.uu.net
Commodore, Engineering Department   fone: 215-431-9255 (only by moonlite)

Henry Spencer

5/25/89

In article <1182@wpg.UUCP> russ@wpg.UUCP (Russell Lawrence) writes:

>Could someone please post how-to info on interpreting the table? I've
>tried checking the contents of register 76, but what I get is a listing
>that varies from eight numbers to about a hundred... *not* 511.

Sure you aren't losing some of them because of lack of flow control on
the line between modem and host? It's really easy to drop a chunk of
stuff when you ask a TB for something like a register listing and your
host can't keep up with full-blast input.
--
Van Allen, adj: pertaining to | Henry Spencer at U of Toronto Zoology
deadly hazards to spaceflight. | uunet!attcan!utzoo!henry he...@zoo.toronto.edu

Bill Mayhew

5/26/89

The line status registers (S70 .. S78) are indeed documented as
follows in the manual. In case of misplaced manuals, they are:

S70 Instantaneous Transmit Rate. Outbound raw bit rate, not
necessarily the actual throughput.

S71 Transmit Bits Per Channel. Reports number of bits
currently in use for all 511 carriers. Read only.

S72 Istantaneous Receiver Rate. Inbound raw bit rate, not
necessarily the actual throughput.

S73 Receive Bits Per Channel. Reports number of bits
currently in use ofr all 511 carriers. Read only.

S74 Received Packets Retrasmitted. Number of received packets
requiring retransmission since start of this call.
Read only.

S75 Packets Accepted. Number of good packets received since
current call began. Read only.

S76 Equivalent Line Noise Profile. CNR to the nearest 1/10th
dBm at all 511 frequency points. Read only. Now this is
definitely a cool register!

S77 Frequncy Offset. Observed frequency offset of the communi-
cations channel in Hz. to the nearest 1/16 for the current
connection. Valid for either PEP or regualr connection.

S78 Slow Mode Line Quality. Merit figure 0 .. 100. 50 or
or higher menas that the line will support acceptable
communication. Redialing is recommended if you have a
merit of less than 30.

Bill
wtm@impulse.UUCP

Jean-Pierre Radley

6/1/89

High Speed transfers (was: Telebit registers)

In article <1182@wpg.UUCP> russ@wpg.UUCP (Russell Lawrence) writes:

>In article <49@wells.UUCP>, edw@wells.UUCP (Ed Wells) writes:

>BTW, Ed mentioned in a previous article that he was unable to get his
>TB+ to work faster than 9600 on outgoing calls. My uucico supports
>19.2 kbs calls, but I've never (ever) been able to get a throughput
>of more than 700 bytes per second. One of my net neighbors thinks
>the problem might be line noise, but I'm beginning to suspect that something
>else is wrong. If anyone else has encountered a similar problem, how
>about sharing the solutions?

The calling computer must be running at 19200, and also the receiving
computer.

On the dial-out port, stty should reveal a speed of 19200. On the
receiving computer, the gettydefs for the receiving port should also be at
19200.

CPU <-@19200-> TB <-@9600-> telephone lines <-@9600-> TB <-@19200-> CPU

Each computer talks with its trailblazer at 19200.
Each trailblazer talks with the telephone line at 9600.
The faster throughputs, up to 1700 or 1800 bytes/sec, occur on ASCII files,
or data files with lots of blocks of nulls or spaces. The trailblazers can
compress such files while in PEP mode.
Files which are already compressed, or most binary files, will not transfer
at such a rate.
--
Jean-Pierre Radley CIS: 72160,1341 jpr@jpradley.UUCP

Chris Lakewood

6/2/89

High Speed transfers (was: Telebit registers)

In article <9858@dasys1.UUCP> jpr@dasys1.UUCP (Jean-Pierre Radley) writes:
>CPU <-@19200-> TB <-@9600-> telephone lines <-@9600-> TB <-@19200-> CPU

                    ^^

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>compress such files while in PEP mode.
>Files which are already compressed, or most binary files, will not transfer
>at such a rate.
>--
>Jean-Pierre Radley CIS: 72160,1341 jpr@jpradley.UUCP

Wrong. The two modems communicate using PEP at varying speeds up to
18,000 bps. The content of the data (i.e. binary vs. ASCII) has
NOTHING to do with the speed at which the modems communicate.

An extension to PEP called PEP2 supports data compression and can
achieve speeds of 19,200 bps on compressible data.

It is not uncommon to see speeds of 1400 characters/sec or more on
data that is ALREADY compressed. This is where Telebit is way ahead
of the other "high-speed" modem makers. Their claims of 9600, 19200, or
38,400 are based on sending data which is highly compressible. If the
data is already compressed, their thoughput goes WAY down.

Please check you facts.

hami...@osiris.cso.uiuc.edu

6/4/89

High Speed transfers (was: Tele

chris@netcom.UUCP says:
> It is not uncommon to see speeds of 1400 characters/sec or more on
> data that is ALREADY compressed. This is where Telebit is way ahead

> 38,400 are based on sending data which is highly compressible. If the
> data is already compressed, their thoughput goes WAY down.
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i can't speak for all high-speed modems, but my old HSTs routinely got
~1100 c/s on already compressed files, and my new HSTs (50% faster) get
over 1600.

Daniel A. Graifer

6/6/89

High Speed transfers (was: Tele

I have a pair of Prime EXLs that were running ATT SysV 3.0 hdb uucp over
TB+ long distance (VA to CA) and routinely achieving 1400cps. Recently,
the VA machine was upgraded to 3.1, and uucico at 19,200 stopped working. I
can only get garbage unless I slow down to 9600. This is true when I call
uunet as well. Prime says they are aware of this, but cannot tell me why.
Anybody have any ideas what they broke in this release? FYI, 3.1 was the
release of "Network Support Utilities" and the routing of everything thru
STREAMS.
Thanks in advance.
Dan
(Note, use address below, "Reply" may not work.)

Daniel A. Graifer
uunet!fciva!dag
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