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Token Ring Performance: TokenTalk NB Card Packet and Frame Sizes

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TOPIC -----

Is there a way to "tune" the packet and frame sizes of the TokenTalk NB card for best throughput depending on the application? I know that AppleTalk has fixed packet limits, but can the SNA or the future TCP on Token Ring packet size be tuned for an individual LU or application to get comparable performance to the DOS or Windows computers?

DISCUSSION -----

The TokenTalk NB card code supported frame sizes of 1536 maximum. SNA•ps 1.0 had to use 256 byte frames in order to support 8 sessions on the 1/2 MB card with TokenTalk 2.2 running at the same time. Single APPC sessions could increase the frame size to 2048, but the number of sessions was limited to 4 or 5. There is no real hope for old TokenTalk cards in this regard, since the RAM limits the frame size used by the application (SNA•ps 1.0) to something smaller than the Token Ring driver could use. The new CDEV and TokenTalk 2.4 make the situation of RAM availability worse, since SNA•ps 1.1 and TokenTalk 2.4 CANNOT LIVE ON THE CARD AT THE SAME TIME.

The new Token Ring NB card comes with 1/2 MB of RAM, and is expandable to 2.5MB. It is suggested for ALL SNA•ps gateways to use at least 1MB of RAM. The new Token Ring driver has a default frame size of 4464 bytes at 4 Mbps and 17,960 bytes at 16 Mbps. This should be large enough for any application to use. SNA•ps 1.1 will try to get 4096 byte SNA frames across the link regardless of the speed. Keep in mind that TokenTalk is AppleTalk frame limited to 500+, and with distributed sessions that situation won't change. Also, it would take a great deal of RAM for a Token Ring card to use 17,960 byte frames at 16 Mbps. So no Apple application will call for such large frame sizes, even though they are possible.

To summarize, it appears the throughput situation will improve with the new card and software by a factor of 10 times, if judged only by frame size allowed. RAM expansion will be needed to make this happen. AppleTalk based clients won't see more than 2 times improvement. TokenTalk cards won't improve under the new software.

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