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DATA TRANSFER RATES (RAND/UCLA)

The attached memo indicates data rates typical of our use of RJS at UCLA CCN. Earlier timing tests (similar but more detailed) with UCSB showed that most of the time was lost because of: (1) channel contention with our disk drive access; (2) our NCP runs at a higher priority than batch jobs but lower than text editing and interactive graphics; (3) OS interrupt handling is very slow on both ends; (4) spooling time of the remote system.

MEMORANDUM

TO: John Heafner
FROM: Bob Hoffman
COPIES: Bob Mobley, Herb Shukiar

Here are some of the transmission rates I have noted over the network between Rand and UCLA. These were all taken at night when little else was happening on our 65.

SEND TO UCLA

# Cards	Blocksize (bytes)	Time (secs)	Rate (bits/secs)
642	80	50	8218
375	80	30	8000
509	800	20	16288

RECEIVE FROM UCLA

For all figures below, the receiving file has blocksize of 1330 bytes, and each line is assumed to contain 100 bytes. This last assumption is fairly accurate, since most of the lines were from PL/I for which this is a very good number. Thus, for each rate, the number of bytes is the # Lines * 100.

# Lines	Time (secs)	Rate (bits/secs)
4900	200	19600
872	47	14843
3900	185	16865

As you can see from the send figures, blocking makes about a 2:1 difference. Memory also recalls a 2 or 3 to 1 advantage for blocking on receive when we were getting unblocked files from UCSB.

REH:gb

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