According to the Dennis, WAN capacity is estimated by estimating the peak and average usage on the network, measured in characters per second. However, for a new network, such as the Tahoe Electronic Meeting Center, that is simply not possible. In that case, the WAN link size needs to be estimated.

Below, I present a formula for calculating the WAN capacity that you can use to for your RFP. This simple approach to calculating WAN capacity is to make \( W \), the WAN link capacity equal to the product of three estimated values:

\[
W = N \times T \times C
\]

where

- \( N \) = the “typical” number of users using the network at peak capacity. This can be estimated by assuming some sort of room occupancy rate or meeting room attendance figures. That is, what do you think is the likely maximum number of users on the network under conditions when the hotel is maximally occupied.

- \( T \) = the percent of network traffic generated by these users traveling out the WAN link (remember not all users will be actively connected to the Internet).

- \( C \) = the peak capacity per user. What is the highest a data rate does each user need under peak conditions? Two brackets for this capacity might be chosen to be the equivalent to 56K dialup performance at the lower end and the “shared 10BaseT equivalent for heavy traffic conditions” (see Figure 4-17 in the text), which the book estimates at 500 kbps.

[Note: there will also be the issue of maintaining an outside line to the extranet described in the RFP. This could be significant, given the concept for the facility that patrons would ship in large volumes of materials onto the onsite server in preparation for a meeting, seminar or training session, but because of the difficulty of calculating this, for simplicity we’ll ignore it for now.]