count. ATM switches use wormhole routing, that is after getting the 5 header bytes, they start transmitting. Thus there id little delay in each switch. Minimizing the number of switches traversed is then not so crucial.

6.3 No. The problem is essentially the same with more than two armies.

6.17 Even though the user is typing at a uniform speed, the characters will be echoed in bursts. The user may hit several keys with nothing appearing on the screen, and then all of sudden, the screen catches up with the typing. People may find this annoying.

6.18 The first bursts contain 2K, 4K, 8K, and 16K bytes respectively. The next one is 24 KB and occurs after 40 msec.
1.24 It is a typical network layer packet, similar, for example, to the Novel IPX packet or IP packet.

1.26 Small, fixed length cells can be routed through switches quickly, and completely in hardware.

5.1 File transfer, remote login, and video on demand need connection-oriented service. On the other hand, credit card verification and other point-of-sale terminals, electronic funds transfer, and many forms of remote database access are inherently connectionless, with a query going one way and the reply coming back the other way.

5.4 The negotiation could set the window size, maximum packet size, and timer values.

5.15 The protocol is terrible. Let time be slotted in units of T sec. In slot 1 the source router sends the first packet. At the start of slot 2, the second router has received the packet but cannot acknowledge it yet. At the start of slot 2, the second router had received the packet but cannot acknowledge it yet. At the start of slot 3 the third router has received the packet, but it cannot acknowledge it either, so all the routers behind it are still hanging. The first acknowledge can only be sent when the destination host takes the packet from the destination router. Now the acknowledgment begins propagating back. It takes two full transits of subnet, 2(n-1)T sec, before the source router can send the second packet. Thus the throughput is one packet every 2(n-1)T sec.

5.22 Since no routing (there is only one telephone line), the device is a half bridge.

5.24 No problem. Just encapsulate the packet in the payload field of a datagram belonging to the subnet being passed through and send it.

5.32 As far as the receiver is concerned, this is a part of new Datagram, since no other parts of it are known. It will therefore be queued until the rest show up. If they do not, this one will time out too.

5.33 IP uses store-and-forward packet switching. Packets are stored fully before being forwarded. The time to store a packet and then retransmit it often exceeds the time on the wire. Hence store-and-forward networks try to avoid this operation by minimizing hop