

Number of NEs Managed through a Single 64 Kbps Time Slot

The answer is 4 active windows. This paper addresses the question of how many network elements (NE) can be managed from a Network Management Center (NMC). Many parameters limit the maximum number of NEs, the addressing limits of the NEs, the processing power of the workstations, and the throughput of the transport network to reach the NEs.

When the Inband Management technology of Loop Telecom is employed, the inband channel used is one time slot, or 64 Kbps. This rate can limit the number of NEs to be managed simultaneously from a single NMC. By “simultaneous” we mean that these NEs are actively being managed. The number of NEs the NMC can address can be very large, so long as these NEs are not actively being managed. When inactive, the only messages from these NEs will be alarms and routine reports. When active, a window on the workstation is dedicated to the NE for real time viewing of the NE status.

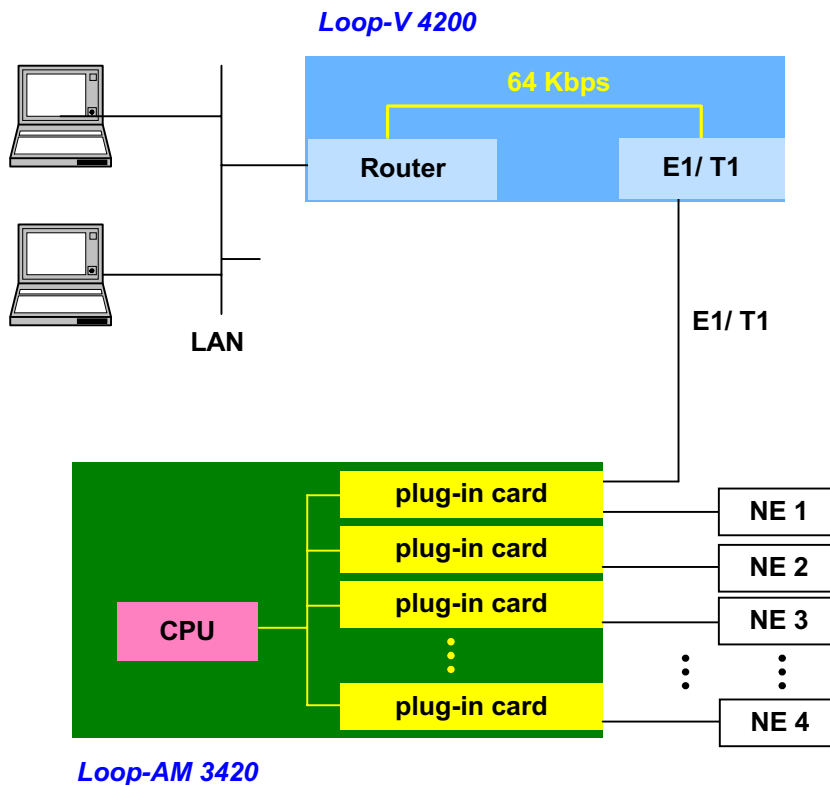


Figure 1 – Inband Network Management

In Figure 1, a management terminal is connected to a Router via a LAN. From the Router, a time slot of 64 Kbps is assigned for management of a remote NE cluster. When a window is opened on the workstation for a remote NE, the average transmission rate is about a kilobyte or 8 Kbps. Thus the recommended maximum number of windows is 4, using up half of the 64 Kbps capacity. Above 4 windows, some temporary congestion will be experienced.