Asynchronous Transfer Mode ATM

ASYNCHRONOUS TRANSFER MODE (ATM):

Asynchronous Transfer Mode (ATM) is an International Telecommunication Union-Telecommunications Standards Section (ITU-T) standard for cell relay wherein information for multiple service types, such as voice, video, or data, is conveyed in small, fixed-size cells. ATM networks are connection-oriented.

ATM is a cell switching and multiplexing techonlogy that combines the benefits of circuit switching with those of packet switching. It provides scal;able bandwidth from a few megabits per second to many gigabitsper second. ATM is more efficient than synchronouse technlogy, such as TDM.

ATM Basic Cell Format:

ATM Cell Basic Format ATM transfers information in fixed-size units called cells. Each cell consists of 53 octets, or bytes. The first 5 bytes contain cell-header information, and the remaining 48 contain the payload (user information).

ATM Devices:
An ATM network is made up of an ATM switch and ATM endpoints. An ATM switch is responsible for cell transit through an ATM network. The job of an ATM switch is well defined: It accepts the incoming cell from an ATM endpoint or another ATM switch. It then reads and updates the cell header information and quickly switches the cell to an output interface toward its destination. An ATM endpoint (or end system) contains an ATM network interface adapter. Examples of ATM endpoints are workstations,

routers, digital service units (DSUs), LAN switches, and video coder-decoders (CODECs).
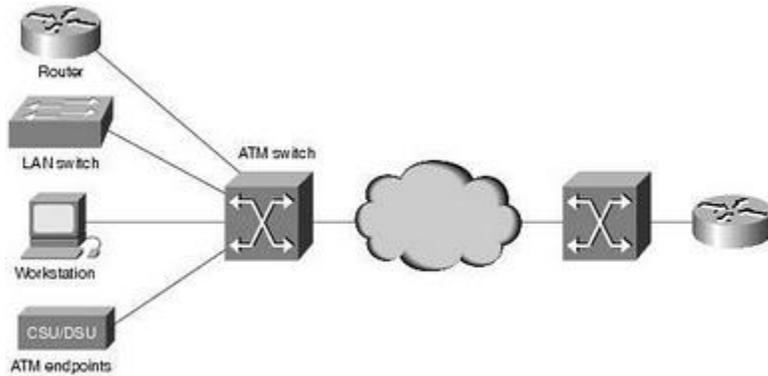
ATM Network Interface:

An ATM network consists of a set of ATM switches interconnected by point-to-point ATM links or interfaces. ATM switches support two primary types of interfaces: UNI and NNI. The UNI connects ATM end systems (such as hosts and routers) to an ATM switch. The NNI connects two ATM switches.
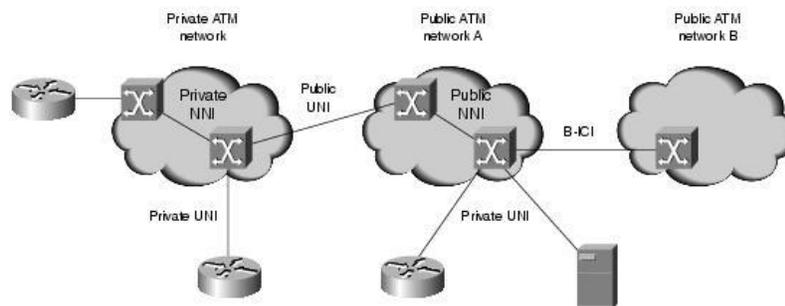
UNI and NNI can be further subdivided into public and private UNIs and NNIs. A private UNI connects an ATM endpoint and a private ATM switch. Its public counterpart connects an ATM endpoint or private switch to a public switch. A private NNI connects two ATM switches within the same private organization. A public one connects two ATM switches within the same public organization.