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cells are switched between users, and trunks that interface to landlines are also managed here.

MSCS (Microsoft Cluster Server) A feature of Windows NT that enables two NT servers that are connected on a network to logically function as one. Microsoft Cluster Server software also provides failure detection and the ability of one server to take over all functions if the other stops operating.

MTP (Media Termination Point) In IP telephony, a reference to a point where an RTP Ethernet packet stream is terminated while system features are executed. H.323 signaling invokes the MTP function when it is needed; however, MTP resources must be made available. For example, if a call is placed on hold or parked, the call that is on hold must temporarily terminate at some hardware point. This hardware point is known as an MTP. The hardware that makes up MTPs is usually a gateway or router port. This is inherent in hardware for calls connecting to the PSTN; however, for *internal calls* put on hold that would otherwise not route through a gateway, an MTP must be allocated. If there are no MTP resources available when a feature is executed, the feature will not work. Some MTP functions are handled through software in smaller IP telephony deployments.

MTSO (Mobile Telephone Switching Office) This is where all control is done for a cellular switching network within a LATA. Smaller MSCs hand off calls to the MTSO. The MTSO is where the billing, trafficking, maintenance monitoring, and hand-offs to long distance and local land-based carriers happens.

Mu Law The ITU-T companding standard used in conversion between analog and digital signals in cellular radio systems. The Mu-Law standard is used in North America; the majority of the world utilizes the European A-Law standard. Also see *Companding*.

Muldem (Multiplexer Demultiplexer) An archaic name for a multiplexer.

Multicast In Ethernet, packets are classified by routers into three categories: unicast, broadcast and multicast. A unicast address is unique to a single host (a computer, IP phone, or other network appliance). A broadcast packet floods a network, which means it is sent to every host, and every host processes the packet. Broadcast packets are not forwarded by routers, so they are limited to the domain that they are sent in. To meet the needs of business applications such as videoconferencing, where more than one user must receive the data yet not all hosts are forced to receive and process the packets and packets must be forwarded beyond a router, multicast techniques were developed. Multicast enables select groups of users to receive the same data transmission on a network. Multicast is made possible by PIM (Protocol Independent Multicast). A network can be configured to utilize PIM as one of two features: PIM Dense Mode and PIM Sparse Mode. PIM Dense Mode floods a network, sending the packets that make up the transmission to every device on a network. Routers on the network then identify which users respond to the Multicast flood, and then prune (discontinue) packet transmissions from devices that do not respond. The advantage of PIM Dense Mode is that its operation is simple to