LAP Manager 802.2 Protocol Network-level protocols

The Institute of Electrical and Electronics Engineers (IEEE) has defined a series of communications protocols for use on a variety of networks. At the physical level, these protocols include the 802.3 CSMA/CD protocol, the 802.4 token bus protocol, and the 802.5 token ring protocol. At the data link level, you access these protocols through another IEEE protocol, the 802.2 protocol. The AppleTalk **LAP Manager** includes two routines that allow you to attach and detach protocol handlers for 802.2 Type 1 data packets: the L802Attach and L802Detach routines. You can write an application that reads 802.2 Type1 data packets and use the L802Attach routine to install your application as a client of **The LAP Manager**. The ANSI/IEEE standards for the 802 protocols are published by the IEEE.

The first 14 bytes of a packet sent or received by **The .ENET Driver** constitute the header. The first 12 bytes consist of the destination and source data-link addresses, such as the Ethernet hardware addresses. If the value of the last two (2) bytes in the header is greater than 1500, then **The .ENET Driver** treats that field as an Ethernet protocol type discriminator. See **The .ENET Driver** for more information on Ethernet protocols. If the value of the last 2 bytes in the header is less than or equal to 1500, then the packet is an 802.3 protocol packet and this field indicates the length of the 802.3 data. **The .ENET Driver** passes all 802.3 packets to **The LAP Manager**.

The LAP Manager gets the 802.3 packet from **The .ENET Driver**. The first 3 bytes of the 802.3 data constitute the header for the 802.2 protocol. The first byte of the 802.2 header is known as the destination service access point (DSAP). If the DSAP field is equal to 0x0AA, then the first 5 bytes of the 802.2 data constitute a protocol discriminator known as the subnetwork access protocol (SNAP) type. If the SNAP type field is 0x000000080F3, indicating the AppleTalk Address Resolution Protocol (AARP), then the next 4 bytes of the 802.2 data constitute a third type field, the AARP packet type. AARP is discussed in *Inside AppleTalk,* second edition.

When you call the L802Attach routine, you provide a pointer to your protocol handler, the reference number of **The .ENET Driver**, and a pointer to a string containing one or more type fields. The type fields indicate the DSAP value and any other protocol type fields (such as the SNAP type and the AARP type). **The LAP Manager** delivers to your protocol handler any 802.2 data packets that have the protocol type you specify.